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Air Conditioning & Refrigeration News

The Newspaper of the Industry

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NEW PRODUCTS, NEW TRADE POLICIES AND NEW INDUSTRY LEADERSHIP ARE IN THE MAKING AS MANUFACTURERS, ENGINEERS, CONTRACTORS, DISTRIBUTORS, DEALERS, JOBBERS & SERVICE MEN PLAN TO GET TOGETHER

'Package Units' Avoid Mistakes In Application

Carrier Engineer Explains Trend To Self-Contained Air Conditioners

OKLAHOMA CITY, Okla.—Manufacturers have developed "self-contained" air-conditioning units which require only water and electrical connections in 10 and 15-ton capacities, to offset the difficulties which have arisen in connection with faulty field applications, according to A. G. Hillen, Carrier engineer. The new units are complete "central-station" cooling and conditioning systems which require no refrigerant piping in the field and can be installed with a minimum of expense.

Speaking before the National Funeral Directors Association here recently, Mr. Hillen explained that "the few failures you hear about in air-conditioning systems could be traced to mistakes in field applications, rather than in the equipment itself." The new self-contained systems are designed to make failures of this kind impossible.

Mr. Hillen advised the morticians, who are all potential buyers of air-conditioning equipment, against "pinching pennies" in the installation of an expensive air-conditioning system.

"It seems well to emphasize that regardless of the equipment selected or quality of material used the success or failure of the system is dependent on the proper coordination of the various parts. An expenditure of $5,000 can be a failure due to the improper selection or sizing of $5 worth of piping required in making connections between some of the various equipment."

Mr. Hillen warned against the use of "evaporative" cooling systems in areas where they would not give satisfactory operation. "Neither the mechanical or evaporative system may be adaptable to all conditions. Just because an evaporative system is adaptable in one locality it cannot be assumed that it will work in another.

"The success of the evaporative cooling system is dependent entirely

(Concluded on Page 3, Column 3)

New National Air Conditioning Association Will Hold Open Meeting To Discuss Need For Cooperative Program of Education and Market Development

Seven Associations To Be Represented At 2nd Annual All-Industry Exhibition In Chicago, Jan. 15-18, 1940

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Throughout the industry a new spirit of cooperation is in the air. More than ever before, there is a willingness to meet the other fellow half-way, listen to his arguments, and give consideration to his proposals.

Good reasons there are for the new trend—as will be explained later. Broadly speaking, the situation may be summed up in the one word *"problems."* The industry is faced with many problems and no one company can solve them alone.

The "high-hat" attitude of some interests, unintentional or otherwise, seems to be on the way out. It was a by-product of self-sufficiency. Now, there is a pressing need for a common understanding of intra-industry relations and a cooperative approach to public education and market development.

The All-Industry Refrigeration and Air Conditioning Exhibition has become the symbol of the movement and the meeting ground where mutual interests may be discussed. The second annual show, to be staged in Chicago next January, looms up as an event of unusual significance.

(Concluded on Page 4)

Exhibition Schedule

Stevens Hotel—Chicago

Opens	Closes
10 a.m.—Mon., Jan. 15	10 p.m.
10 a.m.—Tues., Jan. 16	6 p.m.
10 a.m.—Wed., Jan. 17	10 p.m.
10 a.m.—Thurs., Jan. 18	4 p.m.

All-Industry Banquet
6:30 p.m. Tues., Jan. 16

Note: See page 9 for program of First Annual Convention of the National Air Conditioning Association. (Distributors and dealers.)

54,609 Ice Boxes Junked In New York Round-Up

NEW YORK CITY—A total of 82,632 automatic refrigerators, 54,609 of them replacements for old ice boxes, were sold during the "Old Ice Box Round-Up" campaign staged from April through July by Consolidated Edison Co. and cooperating distributors. Complete results of the drive were announced Oct. 25 by E. F. Jeffe, Consolidated Edison vice president.

Sales reported for the drive include only 1939 models of the 13 makes of refrigerators participating, and do not include refrigerators installed in housing developments, Mr. Jeffe said. He estimated there were more than 25,000 such sales.

The 82,632 refrigerators sold during the campaign had a retail value of more than $10,000,000, it was reported.

Rating Methods For Unit Conditioners Published By A.S.R.E. Committee

NEW YORK CITY—Bulletins containing the text of the proposed Standard Methods of Rating and Testing Self-Contained Air-Conditioning Units for Comfort Cooling and the Standard Method of Rating and Testing Refrigerant Expansion Valves have just been published by the American Society of Refrigerating Engineers.

The proposed air-conditioning standards are listed as Circular No. 16, and the expansion valve standards as Circular No. 17. Copies are obtainable from A.S.R.E. headquarters here at a cost of 20 cents each.

First All-Industry Show Attracted Active Buyers

CHICAGO—"It was a 'buying' show." So stated the opening paragraph of the story in the Jan. 25, 1939 issue of AIR CONDITIONING & REFRIGERATION NEWS reporting the results of the FIRST All-Industry Refrigeration & Air Conditioning Exhibition held last January in Chicago. This report on the All-Industry Show went on to say:

"Final registration figures showed that a total of 6,274 persons had signed up to get into the exhibition hall. While this figure astounded all concerned and exceeded all expectations, what the exhibitors were really open-mouthed about was the real buying interest manifested by those who attended the show."

Some facts about this buying interest: One air-conditioning manufacturer sold $10,000 worth of equipment and signed up seven new dealers; a manufacturer's agent wrote $12,000 in signed orders; a manufacturer of compressors had closed enough orders by the end of the first day to more than repay them for the money they had spent on the show, and another compressor maker had sold 20 units before the show even opened.

That was the first All-Industry Refrigeration & Air Conditioning Exhibition, held last January. The Second All-Industry Exhibition, to be held Jan. 15-18 in the exhibition hall of the Stevens hotel in Chicago, promises to be a far greater and more successful affair than the inaugural show, for the following reasons:

1. The American Society of Refrigerating Engineers, the Refrigeration Service Engineers Society, and the National Air Conditioning Association will hold conventions in Chicago during the week of the show. The National Air Conditioning Association and the Service Engineers will meet in the Stevens, and the A.S.R.E. will meet in the Blackstone hotel, which is right across the street from the Stevens.

2. There will be more exhibits at the show, and a broadened scope of interest for visitors. To date 138 exhibit spaces have been sold for the show, according to M. W. Knight of Peerless of America, Inc., chairman of the exhibition committee, about a third more than were used at the show last year.

3. Among the new exhibitors will be such unit equipment manufacturers as General Electric, Kelvinator, and Carrier, generally known as being members of the "Nema" group

(Concluded on Page 5, Column 1)

Nema To Spend $245,000 For Co-op Program

Main Effort Centers on 'Planned Kitchens' Promotion Plan

CHICAGO — National Electrical Manufacturers Association, through its refrigerator, range, roaster, and water heater groups, will support next year's Modern Kitchen Bureau program on these products to the tune of $245,000, and will add another drive, this one on "planned all-electric kitchens," to help dealers realize more sales of this type.

Support of the promotional program for 1940 was voted by Nema section members at meetings held during the organization's annual convention in the Palmer House here last week. As in the past, all the programs will be carried on through Modern Kitchen Bureau.

The drive on "planned all-electric kitchens," planned in addition to the four other individual-appliance campaigns, will serve as a tie-together to give dealers an opportunity to sell prospects on the complete kitchen idea.

Assuming that individual appliance manufacturers' advertising expenditures continue next year at their current 1939 pace, about $1,730,000, Nema appliance section members estimate that well over $2,000,000 will be spent to promote appliances during the next 12 months.

Electrical appliances have shown sales gains from 20 to 50% this year, it was pointed out, and the expanded program is being launched for 1940 with even better prospects of increased business during that period.

Thomas Evans of Merchant & Evans Co. was re-elected chairman of the Nema Refrigeration Division, and H. J. Maugher of Edison General Electric Appliance Co. was re-elected head of the Electric Range Division. H. B. Donley of Westinghouse Electric & Mfg. Co. was chosen as chairman of the Roaster Division of the

(Concluded on Page 2, Column 3)

Nine-Month Refrigerator Sales In Philadelphia Beat '38 Mark By 42%

PHILADELPHIA—Electric refrigerator sales in the Philadelphia area during the first nine months of this year totaled 51,176 units to show an increase of 42% over the 35,832 units sold during the same period of 1938, according to reports by distributors and dealers to the Electric Association of Philadelphia.

Retail dollar value of sales this year amounts to $8,820,329, a gain of 39% over the mark for the corresponding period of last year, $6,300,268. Average retail unit price this year was $172, as compared with $176 in 1938.

For the three months of the year's third quarter, 1939 sales ranged all the way from 6 to 63% above comparative totals for last year. July sales registered the largest gain, the month's total of 5,285 units being 63% higher than the 1938 mark of 3,237.

August sales were 4,305 units this

(Concluded on Page 2, Column 1)

'Refrigerators Refinished In the Home' Proves A Good Business & Points Out an Opportunity

By James McCallum

DETROIT—Casting about for new ways in which he might extend the scope of the spray painting business which he operates, E. G. Newell of Newell Spraying Co. last spring hit upon the field of refinishing refrigerators and other major appliances.

With practically no idea of what market existed for this sort of service, Mr. Newell gambled on a listing in the classified section of the telephone directory under the heading "Refrigerators Refinished." Further appeal was made through the offer: "Refinished in your own home."

Soon queries began to trickle in, and these queries were converted into business. Now Mr. Newell does refinishing not only for individuals but also for some of the city's smaller dealers.

As yet his volume of business in this line is relatively small, but he feels that when he is able to prepare some real advertising, probably in the way of direct-mail promotion, he will be able to develop this "sideline" into a really profitable operation.

Mr. Newell and the two men who work with him are capable of handling any refinishing problem from touching up nicks or worn spots to completely re-enameling the appliance. He says they have developed a system through which they can go to a customer's home, refinish the applianoe in question, and be out of the house in an hour, leaving no mess of any kind behind them.

Instead of using small, self-contained spraying outfits, which he

(Concluded on Page 3, Column 1)

Philadelphia Sales Up Higher In 3rd Quarter

(Concluded from Page 1, Column 5)

year, an increase of 6% over last year's 3,936, and September showed a wider margin of gain over 1938 with 3,498 units, 33% above the previous year's 2,617 for the month.

Sales by Philadelphia Electric Co. for the first nine months of the year amounted to 6,211 units, approximately 12% of the three-quarters' total, and represent a gain of 110% over utility sales for the same period of last year, which totaled 2,954.

Dollar value of utility sales this year was $1,348,285, an increase of 137% over last year's $575,283 for the same period.

Most notable gain in utility sales was in the average price, $216, compared with $194 in 1938.

The sales report made to the Electrical Association covers sales in Philadelphia, Bucks, Montgomery, Delaware, and Chester counties, and includes the following makes: Coldspot, Crosley, Frigidaire, Gibson, General Electric, Hotpoint, Kelvinator, Leonard, Norge, Stewart-Warner, and Westinghouse.

Steward Moves West

MILWAUKEE — W. A. Steward, manager of Western Electric Co., Inc. in Wisconsin for the last 10 years, has been transferred to Nebraska with supervision over North Dakota, South Dakota, Iowa, Nebraska, and Minnesota. He has been succeeded here by R. D. Sheen, formerly manager in Indianapolis.

Crosley Adds Station & Delivery Wagons

NEW YORK CITY—A station wagon and a delivery car have been added to Crosley's automobile line for 1940, supplementing the convertible coupe and sedan passenger cars originally marketed by the company. The new models had their debut at the National Automobile Show in Grand Central Palace.

Station wagon is priced at $445 and the delivery car at $350, while passenger car prices are $325 for the coupe and $350 for the sedan. All prices are f.o.b. factory.

Three colors—blue, gray, and cream—predominate in the new passenger cars. Top is solid-color black and of three-ply material, two fabric and one rubber. It is said to be easily adjustable and to make the car completely waterproof. Body interior is chrome trimmed; seats are coil type, cushioned, in either red or tan material, and floors are covered with rubber mats.

Both passenger models have rear baggage compartments. Running boards have been eliminated to permit increased width, roominess, and seating comfort.

Power plant of the new cars employs a 2-cylinder, 4-cycle airplane-type motor designed by Powel Crosley, Jr. as a result of research in the airplane motor field, it is said. Motor is air-cooled. Gasoline tank holds 4 gallons of fuel, but the car is claimed to get around 45 miles per gallon on the highway and to travel 1,000 miles on 2 quarts of oil.

Cruising speed of 40 miles per hour is recommended by the factory.

Tom Evans Again Heads Nema Refrigeration Div.

TOM EVANS

* * *

(Concluded from Page 1, Column 5)

association, and J. R. Poteat of General Electric will head the Electric Water Heater Division.

Division and sectional meetings during the conference were devoted to discussions of individual group problems, a general session heard reports on industrial electrification, a discussion of Nema's market development program, and consideration of the proposed program of projects for 1940. Status of pending minimum wage determinations under the Walsh-Healy Public Contracts Act also were reported on.

Creditors Ask Receiver Be Appointed For Majestic Radio

CHICAGO—Following the filing by Majestic Radio & Television Corp. last week of a voluntary petition for reorganization under Section 11 of the Chandler Act, because of inability to meet maturing debts, creditors of the organization have filed a motion in Federal Court here asking that a receiver be appointed for the company.

Motion on the receivership petition was set for a hearing Nov. 1 by Federal Judge John P. Barnes. Meanwhile, he signed an order permitting the company to operate its business in the usual manner.

In continuing the request of certain creditors that a receiver for Majestic be appointed, Judge Barnes said he was taking this action on condition that the salary of R. A. Lasley, president of the corporation, be reduced to $1,200 a month from the present $30,000 annual salary. The court also expressed doubt that the present management could pull the company out of its financial difficulties, noting that the head of the debtor has no substantial interest.

Filing of Majestic's petition for reorganization came shortly after Walter P. Chrysler, Jr. failed to exercise an option to buy 225,000 shares of Majestic stock, which would have given the company additional working capital. The options expired Oct. 23.

Under terms of the arrangement proposed by Majestic, unsecured creditors would receive half of their claims in stock and the balance in cash over a period of two years. Unsecured claims aggregate $816,292, and it is proposed that these creditors receive notes for 50% of their claims, payable in equal instalments in six, 10, 14, 18, 22, and 26 months after confirmation of the plan. Remainder of the claim would be paid in stock of the reorganized company.

Judge Barnes set hearing on the plan by creditors for Nov. 27 before Referee in Bankruptcy Carl Chindblom.

The company's statement said it had received $1,000,000 in orders during the four months ended Sept. 30, against which shipments of $717,000 had been made, compared with shipments of $285,000 in the same 1938 period. Unfilled orders approximate more than $250,000, the statement said.

Majestic was organized in 1936, after the company purchased the goodwill, trade names, etc. of the old Grigsby-Grunow Co., which used the Majestic name.

Schedules filed in connection with the arrangement petition show total liabilities of $1,272,338, and total assets of $1,553,228. Liabilities are made up of $816,292 unsecured; $391,055 secured owing to Continental National Bank and Walter E. Heller & Co.; taxes, $44,252; wage claims, $20,738.

Largest unsecured creditor is Allied International Investing Corp., through which the Chrysler option was arranged, with a claim of $116,500. Of the assets, $993,645 represents stock, of which $459,267 comprises finished receiving sets and $534,378 raw materials and in process; $98,030 machinery and fixtures; $345,423 accounts receivable; and $60,855 securities.

Ban on Below Cost Sales Ruled Out In Pa.

PHILADELPHIA — Pennsylvania's "fair sales act," prohibiting the advertising or sale of retail merchandise at less than cost, has been declared unconstitutional by the State Superior Court. The high court's action affirmed previous action of the Allegheny County Court in quashing an indictment charging a retailer with a misdemeanor under the act.

The court's opinion, handed down by Judge William E. Wirt, held that, while legislation to insure fair trade practices is constitutional, the act in question was so general in its terms as to penalize entirely innocent commercial transactions, which did not either injure the public or represent unfair competitive practices.

Judge Wirt held that the act offends against the "due process" clause of the Constitution in that its scope is not sufficiently limited.

Miller Is Appliance Merchandise Manager For General Electric

BRIDGEPORT, Conn.—L. H. Miller has been appointed merchandise manager for the General Electric appliance and merchandise department, with headquarters here, and will be responsible for supervising those merchandising services which function on behalf of all appliance lines.

He will also be charged with coordinating these full-line activities with those of the individual product sales sections.

Mr. Miller's association with General Electric for several years was primarily concerned with reorganization problems in the field. Prior to the move to Bridgeport he supervised the merchandising services for specialty appliances only, and for a short time was domestic refrigeration sales manager.

His first contact with the company was in 1925 as a refrigeration dealer. Later he was president of the Electric Refrigeration Co., Louisville; vice president and general manager of Electrical Housekeeping, Inc., Cleveland; and president and manager of the Keystone Appliance Co., Harrisburg, Pa. He also opened a new district for G-E Supply Corp. in Allentown, Pa.

Roth Leaves Philco Agency To Form Own Firm

MILWAUKEE—W. H. Roth, vice president and sales manager for Radio Specialty Co., Philco distributor here, has sold his interest in that organization and announced organization of Roth Appliance Distributors. The new company, located at 647 W. Virginia St., will distribute the complete line of Norge home appliances in Wisconsin and upper Michigan.

Mr. Roth was one of the original organizers of Radio Specialty Co., and has been in active charge of sales for the past 14 years. Prior to his association with Radio Specialty, he managed the opening of retail stores in metropolitan centers for The Vim, Chicago sporting goods and electrical house. He has served a term as president of the Wisconsin Radio, Refrigeration & Appliance Association.

Major Appliance Sales Gain Tallied By Omaha Dealers

OMAHA, Neb. — Sales of major appliances by 78 reporting dealers here showed increases during September in every item except electric refrigerators. During the month, 314 refrigerators were sold as compared to 346 in the same month last year, according to the report.

Electric ranges sold during the month totaled 45, while only 6 were sold in September, 1938. Water heaters increased from 10 to 13 this September over last, and washer sales increased from 286 to 389. Dishwasher sales jumped from one to 15 in the comparative period.

Radio sales dipped from 1,508 in September, 1938, to 1,300 this year. Oil burners were off to 108 this September from 202 in that month last year. Stoker sales increased from 41 last September to 48 this year.

Nine months' total sales showed healthy increases in almost every item over the same period last year. Refrigerator sales, however, dropped off 3.77%. Range sales for the period were up 140%, water heaters up 23%, washers up 18%, ironers up 7%, and stokers up 19%. Surprise item was the 750% increase in electric dishwasher sales, totaling 17 so far this year as compared to two in the same period last year.

Village Electric Appliance Co. Installs G-E Kitchen

DALLAS, Tex.—J. A. Coffey, proprietor of the Village Electric Appliance Co. here, has installed a General Electric kitchen in his appliance store.

Equipment includes a refrigerator, range, dishwasher, and disposal unit, and has accessory cabinets to complete the kitchen ensemble.

THE CUSTOMER HAS A WIDE CHOICE

RUST PROOFING MAY *Swing* THE SALE

WHEN your refrigerator prospects come into the market they *can* select a unit that is protected from rust. Many of the world's best known makers add that last touch of completeness by assuring finish stability.

Make sure that the line you sell is Bonderized . . . than use this extra feature as a selling point. It is an important factor. It may be the very point that will make the sale.

Rust prevention is important to you as assurance against finish servicing and reconditioning costs. Bonderizing resists the effects of humidity. It holds the finish and is a barrier to corrosion. It prevents the spread of rust around accidental injury to the enamel.

PARKER RUST PROOF COMPANY • 2197 E. MILWAUKEE AVE., DETROIT, MICHIGAN

Send For This Book

It describes Bonderizing in detail and gives the salesman a new talking point that helps close deals.

PARKER *Processes* CONQUER RUST

BONDERIZING · PARKERIZING

3 Refrigerator Patents Involved In Kelvinator Suit Against Philco

PHILADELPHIA — Nash-Kelvinator Corp. has filed a suit here charging Philco Radio & Television Corp. with infringement on three patents for electric refrigerating devices, and asking for an injunction restraining Philco from continuing the alleged infringements.

A similar suit, alleging infringement of a fourth patent, also had been filed by General Motors Corp., but the company later entered a voluntary withdrawal of its bill for an injunction, without assigning any reason.

Action on the suit by Kelvinator is still pending, no reply having been filed by Philco as yet, and no date has been set for a hearing on Kelvinator's request for a preliminary injunction.

The Kelvinator suit charges infringement of the following patents: No. 19,778, re-issue Dec. 3, 1935 to Copeland Refrigeration Co.; No. 1,833,846, issued Nov. 24, 1931 to Alfred W. Mellowes et al; and No. 1,891,728, issued Dec. 20, 1932 to Kelvinator Corp.

The suit by General Motors Corp. involved but one patent, No. 18,253, re-issued Nov. 17, 1931 to Delos P. Heath, the original patent number being 1,726,486. This patent covered a refrigerator and refrigerating apparatus.

Servel '7% Preferred' Stock To Be Retired

NEW YORK CITY—Directors of Servel, Inc. have voted to call for redemption and retire on Dec. 30 of this year the 6,932 outstanding shares of 7% preferred stock. The redemption price will be $110 a share, plus accrued unpaid dividends.

Payment of a dividend of 25 cents a share on common stock was ordered by the directors, payable Dec. 1 to stockholders of record Nov. 16. Three dividends of the same amount were paid earlier in the year, together with a special of 25 cents in November.

Refinishes Refrigerators At $1 Per Cu. Ft.

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says are not capable of doing a really first-class job, Mr. Newell employs a large air compressor mounted on a trailer. This trailer is parked in front of the house and the air lines run into the room where the refinishing is to be done.

In addition to his "in the home" service, Mr. Newell does considerable refinishing in his own shop on units brought in by both individuals and dealers. Volume of this business has been so satisfactory that he is constructing a special spray booth in the shop.

Charges for the refinishing work vary with the amount of surface to be covered, Mr. Newell explains. For completely refinishing a refrigerator in a customer's home the usual charge is $1 for each cubic foot of the box's rated capacity—i.e., $5 for a 5-cu. ft. box. Because dealers are a source of not only quantity but also repeat business, they are allowed special discounts and dispensations.

B. K. Miller Named Head of Sanitary Refrigerator Co.

FOND DU LAC, Wis.—Boynton K. Miller was elected president and general manager of Sanitary Refrigerator Co. at the annual meeting of stockholders here Oct. 24. Other officers named are H. A. Uihlein, Milwaukee, vice president, and Henry B. Miller, secretary-treasurer. Board of directors consists of Mr. Uihlein, chairman, Arthur Mueller, Milwaukee, and F. H. Boyle, Henry B. Miller, and Boynton K. Miller.

British Journal Re-Named

LONDON, England—"Modern Refrigeration" is the new name of a publication here incorporating "Cold Storage and Produce Review" and "Ice and Cold Storage."

Salesmen Learn Art of Electric Cooking In 2 Days

ATLANTA—How long does it take for appliance salesmen to pick up the fine points of electric cookery? Just two days, in the experience of Georgia Power Co. with a crew of its local representatives.

Under the supervision of Mrs. Mamie K. Taylor, home service supervisor of the company's Atlanta division, and with "graduate" salesmen as their sponsors, the salesmen were put through their paces recently in a special two-day cooking school held in the Electric building here.

To prove that the instruction was not in vain, the "students" were made to prepare complete lunches and serve them to special guests.

Faulty Field Jobs Responsible For Self-Contained Units' Advance, Carrier Engineer Says

(Concluded from Page 1, Column 1)

upon extremely dry natural conditions. We find these conditions in the extreme western part of Texas, Oklahoma, and Kansas, extending through a few states west. Thus the system that is proper for Phoenix, Ariz., may fail completely and be worse than no system in New Orleans," said the representative of the Carrier engineering department.

In explaining the operation of mechanical refrigeration systems of air conditioning, Mr. Hillen compared their operation to that of a household refrigerator. "In the base of the refrigerator the small compressor is pumping a refrigerant gas through a small coil-type condenser, also in the base and to the rear of the compressor, or in some cases on top of the box.

"The refrigerant flows from the condenser as a liquid to the coils surrounding the ice cube compartment. Here it evaporates and the heat required to evaporate it is effective in forming. It can be noted that moisture is being removed from the box, forming ice on the outside of the coils, making defrosting necessary at times.

"If you were to place a fan behind the ice cube compartment blowing air over these coils, it would constitute a miniature air-cooling system with all the essential parts, and performing, largely, the functions of our commercial units.

"In a system for, say a 100-seat chapel, the motor driving the compressor becomes about 10-hp., the condenser grows to about 1,500 lbs. requiring a 1-hp. fan, and the ice cube coils to about the same size, requiring a 1-hp. motor to force the air across the coils and into the space to be conditioned."

While it is fundamental to have a system of this general type, Mr. Hillen stated that there are other factors of no less importance. Correct temperature and humidity conditions may be maintained, and yet improper circulation of air causes "drafty" or stuffy conditions. Equipment may be located in a manner as to cause objectionable noise or vibration. No general rule can be established to prevent these possibilities, the speaker said.

Mr. Hillen emphasized that with proper refrigerating equipment an air-conditioning system must be installed correctly to give the satisfaction which the owner desires.

BUY PEERLESS FOR PERFORMANCE

PEERLESS FLASH COOLER

AIR MOVES FREELY over coil, DESCENDING VERTICALLY from each row . . . Through individual drip pans — MINIMUM FOOD SHRINKAGE. MANY SEASONS OF SUCCESSFUL PERFORMANCE.

PEERLESS FIN COILS

Have been for years the most popular and widely used coil on the market . . . WEDGE-LOCKED, EDGE-LOCKED and RIFLED.

PEERLESS GUN COOLERS

"UPSIDE DOWN COOLING". Fastest selling and most efficient cooling unit of the year . . . A REAL ADDITION TO THE PROFIT LINE.

PEERLESS UNIT COOLERS

A SIZE FOR EVERY REFRIGERATOR. Use where space is limited and maximum coil capacity is needed . . . Thermek High Humidity Coil.

PEERLESS OFF-CENTER COILS

Fits snugly at top of display case . . . using minimum space RIFLED FOR EFFICIENCY . . . EDGE-LOCKED AND WEDGE-LOCKED FOR STURDINESS.

PEERLESS HUMIDI-PACK EVAPORATOR

Controlled air circulation and humidity . . . MINIMUM FOOD SHRINKAGE. Fast Freezing, Fast Cooling . . . Keeps Food Fresh.

PEERLESS PRODUCT COOLER

Can be furnished for room temperatures above 32° or below 32° . . . For large Commercial and Industrial Application where greater capacities are needed.

PEERLESS CAPACITY BOOSTERS

Cuts RUNNING TIME of compressor by giving BETTER COIL EFFICIENCY. A necessity on every coil installation.

PEERLESS VALVES

A GREAT PROFIT LINE.

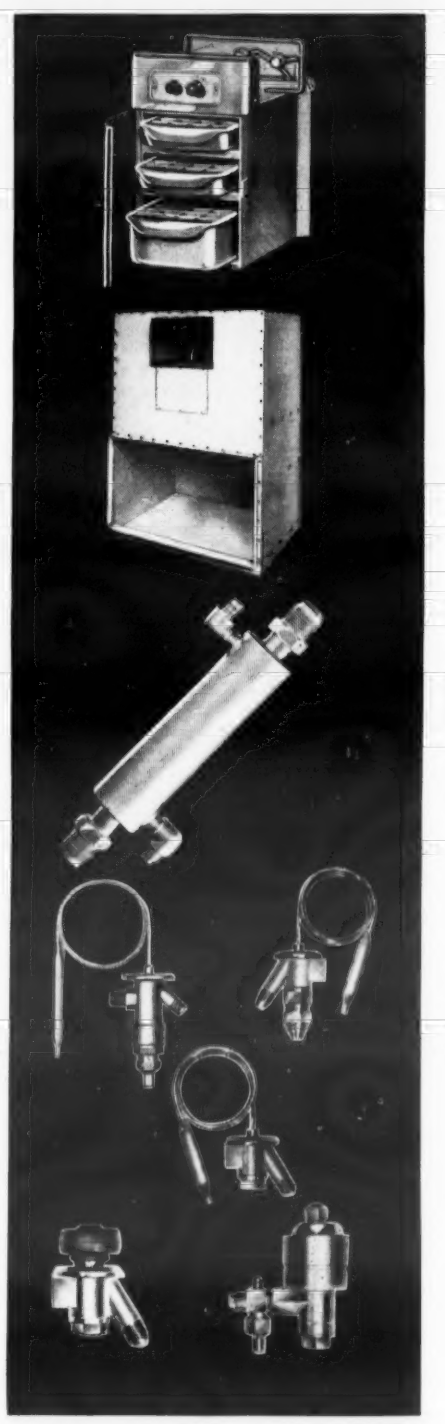
INTERCHANGEABLE ORIFICE CARTRIDGES.

POSITIVE ASSURANCE OF ACCURATE CONTROL.

SEALED IN TAMPER-PROOF METAL CONTAINERS.

TROUBLE-FREE, FACTORY-NEW MERCHANDISE.

A VALVE FOR EVERY PURPOSE.



PERFORMANCE MEANS PROFITS

STOCK IN ALL PRINCIPAL CITIES. SEE YOUR REFRIGERATION PARTS JOBBER.

SEE OUR DISPLAY AT BOOTHS 123, 124, 125 SECOND ALL INDUSTRY EXHIBITION. JANUARY 15-18, HOTEL STEVENS, CHICAGO.

PEERLESS of AMERICA, Inc.

GENERAL OFFICES • 515 W. 35TH STREET • CHICAGO

MIDWEST FACTORY, 515 W. 35TH STREET, CHICAGO, ILLINOIS
NEW YORK FACTORY, 43-20 34TH STREET, LONG ISLAND CITY
PACIFIC COAST FACTORY, 3000 S. MAIN STREET, LOS ANGELES, CALIF.
SOUTHWEST FACTORY, 2218 N. HARWOOD ST., DALLAS, TEXAS
EXPORT DIVISION, P. O. BOX 636, DETROIT, MICH., U.S.A.

Leading Factors In Refrigeration and Air Conditioning Respond To All-Industry Exhibition and Convention Program Sponsored By Rema Organization

. . .

Key Men In All Departments Cooperate To Boost Attendance

(Concluded from Page 1)

The Exhibition is sponsored by the Refrigeration Equipment Manufacturers Association (Rema), the membership of which includes the leading companies making component parts and supplies. This group has a keen interest in the success of all other branches of the industry. The products of Rema members are absorbed into the production of *new* equipment, also in the repair and replacement of *old* installations.

Since the prosperity of the manufacturers of parts and supplies is dependent upon the activity of all other groups (including producers and distributors, jobbers and service men) it is logical that the Rema organization should take the lead in promoting an enterprise for the advancement of the industry as a whole.

It is worthy of note that the Show idea is an outgrowth of a movement started in a small way by the Refrigeration Service Engineers Society back in the Fall of 1935. The young and struggling organization of independent service men had scheduled a meeting in Detroit. The parts manufacturers were invited to exhibit their wares. A few exhibit spaces were sold.

About the same time some of the parts manufacturers were discussing a plan to form an association. Leaders in the rising new jobbing business were also feeling the need for an organization. The initial meetings of both groups were held in the offices of AIR CONDITIONING & REFRIGERATION NEWS. These gatherings gave the needed impetus to the Service Society's exhibit. All three groups went away with visions of bigger and better gatherings.

In the fall of 1936 the R.S.E.S. sponsored another show at Memphis. The Refrigeration Supplies & Parts Mfrs. Association (now the Refrigeration Equipment Mfrs. Association) and the Refrigeration Supply Jobbers Association supported the plan by arranging their meetings at the same place. The exhibits increased in number.

In 1937 the three groups joined forces again by holding their conventions concurrently in Chicago. By this time the show was beginning to take on substantial proportions. The manufacturers, however, were figuring the cost in relation to the attendance. They were also seeing the possibilities of expanding the scope of affairs and staging the show on a much larger scale.

J. S. FORBES
President of Rema.

Early in 1938, the manufacturers started making plans for the First All-Industry Exhibition. The Service Society was urged to forego its own plans for a show in Buffalo, but it was loath to surrender its position. The R.S.E.S. program was carried through but most of the exhibitors elected to wait for the manufacturers' affair scheduled for January, 1939, in Chicago.

Since then a compromise plan has been worked out between the R.S.E.S. and Rema Exhibitions. The service men are now cooperating in the interest of the "All-Industry" program.

The success of the "First All-Industry Refrigeration & Air Conditioning Exhibition" eliminated all doubt regarding the future direction of the movement. Elaborate exhibits filled the hall. Attendance was double that of optimistic advance estimates. Meetings were well attended and constructive plans were enthusiastically endorsed.

A.S.R.E. Joins the Party

Among the crowds which viewed the exhibits and attended the "All-Industry Banquet" were representatives of other well-established organizations with related interests. Gardner Poole, president of the American Society of Refrigerating Engineers, was the principal speaker at the banquet. He impressed his audience with the recent rapid strides of quick-frozen food. Apparently he, in turn, was impressed with the gathering. The A.S.R.E. has now joined the party and will hold its 35th annual meeting in Chicago, instead of Cleveland, as originally planned.

The Refrigeration Division of National Electrical Manufacturers Association (Nema) was also represented by exhibitors and banquet speakers. Additional companies in that group have taken space for the 1940 Show. The Exhibition Committee has assiduously courted full participation by these large manufacturers. They have already appointed an official representative.

Participating for the first time in the next Show, will be the Counter Freezer Association. Other groups have been urged to arrange their meetings coincident with the Exhibition. A major attraction will be the All-Industry Banquet which will provide a complete evening of professional entertainment for all visitors.

Air Conditioning Dealers Organized

Probably the most significant meeting, in terms of its future effects on the industry, will be that of the National Air Conditioning Association. The nucleus of this new organization was formed at a preliminary meeting held in the NEWS offices last year. The first sizable gathering occurred in Chicago during the 1939 Exhibition. At that time the aims and purposes of the new group took shape and a Temporary National Council was appointed.

Since January the various local air-conditioning councils, bureaus, and associations in the principal cities have been actively discussing the need for better trade practices. Prominent distributors, contractors, and dealers have contributed ideas and suggestions. Plans have been interchanged through the medium of a Bulletin published by courtesy of the NEWS.

John H. Keller, Temporary National Chairman of the N.A.C.A., has recently appointed an Advisory Committee which is working on a cooperative program for public education and market development. The plan will be submitted for open discussion at the First Annual N.A.C.A. Convention in Chicago. The permanent organization will be formed and the new association will be formally launched at that time.

Leaders of the new association movement believe that they can present a constructive program which will warrant the active support of manufacturers, public utilities, and all other interests having a stake in the advancement of air conditioning.

FEDDERS
Performing Miracles
with HEAT AND COLD . . .
• At the birth of the automotive industry in the first years of this century, car and truck manufacturers began to safeguard the performance of their motors with Fedders Radiators. Today billions of miles are being covered by millions of the finest cars that roll . . . cooled by Fedders Radiators as standard Factory Equipment.
In step with the forward march of the automotive industry, Fedders announces the completion of a new ultra-modern plant located adjacent to Detroit, the manufacturing center of the industry.
Coincidentally with the opening of this new factory, Fedders will offer Tubular Radiators in addition to its famous Honeycomb type.
This Michigan plant is also serving automotive equipment manufacturers through volume production of high efficiency heating and air conditioning accessories.
In addition to being one of the world's oldest and largest independent manufacturers of AUTOMOTIVE RADIATORS Fedders contributes to the comfort and health of people everywhere by manufacturing
AIRCRAFT ENGINE AND OIL COOLING EQUIPMENT
ELECTRIC REFRIGERATION APPLIANCES
AIR CONDITIONING AND HEATING EQUIPMENT FOR MODERN HOMES AND BUILDINGS
HEATING AND AIR CONDITIONING MATERIAL FOR STREAMLINE RAILROAD TRAINS
ELECTRIC WATER COOLERS
FEDDERS
MANUFACTURING CO.
BUFFALO, N.Y.

This advertisement appeared in the NEW YORK TIMES, Sunday, October 15.

Plan NOW to attend the All-Industry Exhibition, Stevens Hotel, Chicago, January 15-18, 1940. Fedders will see you there at Booths 15 and 16.

R. M. McCLURE
Manager of the Exhibition and Secretary of Rema. (The popular sage of Turkey Run.)

New Factors Will Make January Show Industry's Greatest

(Concluded from Page 1, Column 4)

of manufacturers, who did not show last year.

4. Word-of-mouth advertising about the great success of last year's show is certain to stimulate increased interest and attention in the Second All-Industry Refrigeration & Air Conditioning Exhibition. The show was apparently a topic of conversation for many weeks on the part of those who attended.

5. The show committee and exhibitors are going ahead with an expanded, better-directed, and earlier-started publicity program designed to create attendance at the show.

6. The sponsoring group, the Refrigeration Equipment Manufacturers Association, will hold no meetings during the show period, therefore enabling the individuals from the various companies to devote their full time to their exhibits and to entertaining customers.

With the experience of last year's show tucked under its belt, the exhibition committee of the Refrigeration Equipment Manufacturers Association can be expected to see that such details as registration, services for exhibitors, etc., will be handled even better than last year, when things functioned very smoothly for all concerned. Provision will probably be made for advance registration of both exhibitors and those who make plans beforehand for coming to the show. Some sort of registration will be required of all who enter the exhibition hall.

The exhibition opens at 10 a.m. Monday, Jan. 15 and will stay open Monday until 10 p.m.; on Tuesday the doors will open at 10 a.m. and close at 6 p.m. in time to let exhibitors and guests "dress up" for the All-Industry Banquet scheduled for 6:30 p.m. Tuesday night. Entertainment at the banquet will consist of a floor show, followed by dancing to the music of a nationally known orchestra. On Wednesday the exhibition will be open from 10 to 10, and on Thursday, after opening at 10 a.m., the show officially closes at 4 p.m.

Some committee member with a statistician's mind has figured out that the show will be open an even 38 hours, or 2,280 minutes. With 120 exhibitors, this would mean that a visitor would have less than 20 minutes apiece to spend with each exhibitor if he spent every minute of the four days in the exhibition hall. It's another way of saying that it is a really "big" show.

A ladies entertainment committee has been formed to help entertain wives who may come to the show, and the committee includes Mrs. M. W. Knight, Mrs. H. C. Clay, and Mrs. D. H. Daskal.

The promotion campaign for the exhibition opened Nov. 1, and includes brilliant four-color labels for use on exhibitor's outgoing letters to the trade, direct-mail broadsides, wall placards, and a supply of more than 200,000 envelope stuffers.

Tentative Schedule Of Meetings

Sunday, Jan. 14—
10 a.m.—Board of Directors, R.S.J.A. (Jobbers)

Monday, Jan. 15—
10 a.m.—EXHIBITION OPENS (Manufacturer's Exhibits)
10 a.m.—General Meeting, R.S.E.S.
2 p.m.—General Meeting, R.S.J.A.
6:30 p.m.—Dinner Meeting, Nat'l Council, N.A.C.A.

Tuesday, Jan. 16—
9 a.m.—General Meeting, R.S.E.S.
10 a.m.—General Meeting, R.S.J.A.
10 a.m.—Charter Meeting, N.A.C.A.
1 p.m.—Joint luncheon, R.E.M.A.-R.S.J.A. (Mfrs.-Jobbers)
2 p.m.—Open Meeting, N.A.C.A.
6:30 p.m.—ALL INDUSTRY BANQUET

Wednesday, Jan. 17—
9 a.m.—General Meeting, R.S.J.A.
10 a.m.—General Meeting, R.S.E.S.
10 a.m.—General Meeting, N.A.C.A.
10 a.m.—General Meeting, A.S.R.E.
12:30 p.m.—Luncheon Meeting. National Council, N.A.C.A.
1 p.m.—Farewell luncheon. R.S.J.A.
2 p.m.—Joint Meeting, A.S.R.E.-R.S.E.S.
2 p.m.—General Meeting, N.A.C.A.

Thursday, Jan. 18—
10 a.m.—General Meeting, A.S.R.E.
6:30 p.m.—Dinner Meeting, A.S.R.E.

REFRIGERATION SUPPLY JOBBERS

LEO GORTON, Tulsa

CLARENCE F. (SANDY) PRATT, San Francisco

IRVING ALTER, Chicago

Attendance of Jobbers Expected To Near 100%

One industry group that registered almost 100% attendance at the First All-Industry Exhibition, and who are expected to turn out even stronger for the show next January, are the refrigeration supply wholesalers.

Cartooned at the left are some of the veteran jobbers who will be recognized at the January affair. Leo Gorton of Machine Tool & Supply Co., Tulsa, Okla., is president of the Refrigeration Supply Jobbers Association. "Sandy" Pratt of the California Refrigerator Co., San Francisco, is a leading West Coast jobber, an inveterate California booster, and a founder of such movements as the "Outdoor Christmas Tree Association."

Irving Alter of the Harry Alter Co., Chicago, is one of the Chicago jobbers who will play something of the part of "hosts" to visiting jobbers at Chicago. He is a "camera fan" who has taken hundreds of pictures of industry events and personalities.

Derby Winners
ARE TIMED LIKE THIS
When your dollars are involved... TIMING IS IMPORTANT!
WE BUILT A SWEAT BOX to torture Humidistats!
FROM ARID SAHARA TO A STEAMING TURKISH BATH . . . . . IN AN HOUR
WE HAVE No "Yes Men" FOR INSPECTORS
PENN PRECISION TESTS INSURE DEPENDABLE FIELD PERFORMANCE
depend on CONTROLS
WE MEASURE THE "Life Line" OF A PIECE OF STEEL
SCIENCE ADDS YEARS OF FINE PERFORMANCE TO PENN CONTROL LIFE
PENN
PENN-BUILT CONTROLS
Built to Serve-Not to Service
Controls are the brains of today's automatically operated heating, air conditioning and refrigeration equipment. Customer satisfaction is measured both by manufacturing skill and installation care. Penn's engineering research, precision manufacture and rigid inspection, with many new facilities for superior workmanship, have set up new standards of control accuracy and dependability . . . Penn's thorough, well-established and widely known program of dealer training schools, where problems of control installation and adjustment are frankly discussed, have improved installations, reduced installation time and expense. This, in a nutshell, is Penn's platform for increasing customer satisfaction and trade profit. Specify Penn-built controls for automatic heating, refrigeration, air conditioning, pump and air compressor applications.
Penn Electric Switch Co., Goshen, Ind. Branches in Principal Cities. In Canada: Powerlite Devices, Ltd., Penn Electric Switch Division, Toronto, Ont.
PENN CONTROL SCHOOLS Help Increase Sales . . . Cut Costs
AHEAD OF THE gitt
WE TESTED CONTACT STRUCTURES WITH THIS SHIMMYING VIBRATOR
CUSTOMER SATISFACTION BEGINS HERE
PENN

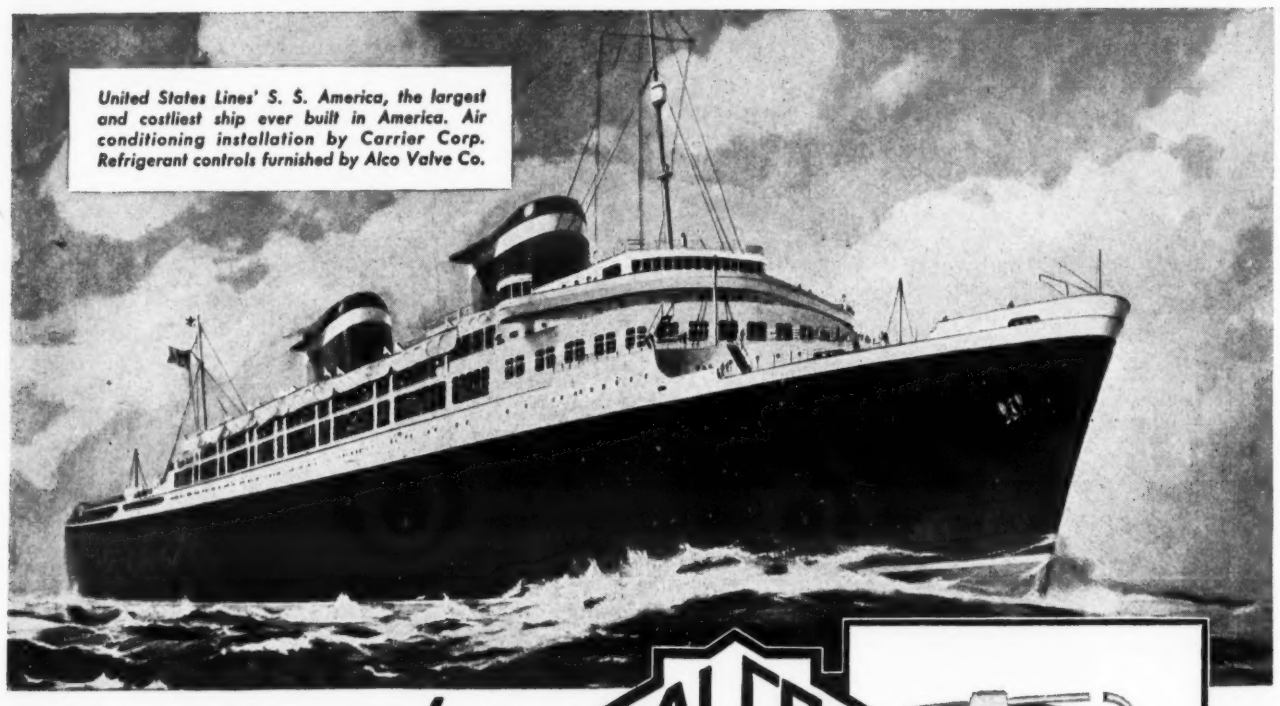
Advance Sale of Space Insures Success of 1940 All-Industry Exhibition

MASTER SHOWMEN

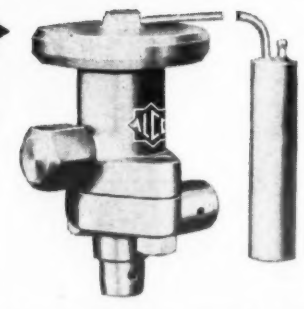
H. V. HIGLEY
Ansul Chemical Co.

MARK MOONEY
Carrier Corp.

Judging from past performance, the Second All-Industry Exhibition in January will be a lively show as well as an interesting and instructive exhibit of refrigeration and air-conditioning products. H. V. "Doc" Higley (left), head of the Ansul Chemical Co., will probably not play an Edgar Bergen role with the well-known Ansul Chemical "twins" as shown here, but he has the reputation of always putting on a good show in his exhibit. Carrier Corp. is one of the new exhibitors at the 1940 Exhibition, and while Mark Mooney, western manager for Carrier's commercial refrigeration division, has made no promises to bring Carrier's New York World's Fair igloo to Chicago, as might be inferred from the cartoon, there will be much interest attached to exhibits of Carrier and other unit equipment manufacturers who will exhibit at the show for the first time.


United States Lines' S. S. America, the largest and costliest ship ever built in America. Air conditioning installation by Carrier Corp. Refrigerant controls furnished by Alco Valve Co.

America's *finest* Refrigerant Controls for America's Finest Ship


Alco Type TCL Thermo Valve

● To assure the most efficient refrigerant control in the Carrier air conditioning installation in the new queen of the American Merchant Marine, Alco Valves were used throughout the system. It was only natural that Alco Valves were selected for America's finest ship, because for years Alco has provided the industry with the finest products in the field of refrigerant controls.

The largest ship ever built in this country, the S. S. America will cost $17,000,000. She is 723 feet long and approximately 30,000 gross tons. Dining rooms in all three classes are air conditioned, as are the beauty parlors and barber shops. Alco is proud to have played a part in the construction of this great liner.

While your air conditioning or refrigeration problems may not be as complex as those of the S. S. America, it is to your advantage to select Alco Valves to add to the efficiency of any system. Proof of Alco's superiority in design and function is found in the hundreds of prominent installations in which Alco controls are used.

Whatever your problems or requirements in the field of refrigerant control, you'll obtain maximum efficiency with Alco Valves. Every Alco control is built to give accurate, trouble-free service throughout an unusually long life. Write to Alco for full information on the extensive Alco line.

ALCO VALVE CO.
2620 Big Bend Boulevard • St. Louis, Missouri

ENGINEERED REFRIGERANT CONTROLS FOR HIGHEST EVAPORATOR EFFICIENCY

• • •

Preliminary List of Exhibitors

Exhibition headquarters: Refrigeration Equipment Manufacturers Association, 111 W. Washington Blvd., Chicago, Ill.

	Booth Number
Acme Industries, Jackson, Mich.	41
Aerovox Corp., New Bedford, Mass.	2
Alco Valve Co., Inc., Maplewood, Mo.	113–114
All-Steel Equip Co., Aurora, Ill.	70
Aluminum Co. of America, Pittsburgh, Pa.	67–68
Aluminum Industries, Inc., Cincinnati, Ohio	152
The American Brass Co., Waterbury, Conn.	143
American Hard Rubber Co., New York, N. Y.	38
American Injector Co., Detroit, Mich.	133
American Radiator & Standard Sanitary Corp., Pittsburgh, Pa.	29
Anemostat Corp. of America, Chicago, Ill.	69
Ansul Chemical Co., Marinette, Wis.	77–78
Arcade Mfg. Co., Freeport, Ill.	1B
Automatic Products Co., Milwaukee, Wis.	82–83
Bonney Forge & Tool Works, Allentown, Pa.	90
Brunner Mfg. Co., Utica, N. Y.	145–146
Bush Mfg. Co., Hartford, Conn.	75–76
Business News Publishing Co., Detroit, Mich.	110-111
Carrier Corp., Syracuse, N. Y.	35–36
Chase Brass & Copper Co., Waterbury, Conn.	56
Chicago-Wilcox Mfg. Co., Chicago, Ill.	91
B. H. Clark Co., DeKalb, Ill.	3B
Commercial Coil & Refrigeration Co., Chicago, Ill.	142
Convention Binder Service, Chicago, Ill.	1C
Copeland Refrigeration Corp., Sidney, Ohio	86–87
Curtis Refrigerating Machine Co., St. Louis, Mo.	8–9
Cutler-Hammer, Inc., Milwaukee, Wis.	71–72
Day & Night Water Heater Co., Ltd., Los Angeles, Calif.	22
Dayton Rubber Mfg. Co., Dayton, Ohio	144
Deissler Machine Co., Greenville, Pa.	136
Detroit Lubricator Co., Detroit, Mich.	88–89
Dole Refrigerating Co., Chicago, Ill.	84–85
E. I. du Pont de Nemours & Co., Inc., R. & H. Chemicals Dept., Wilmington, Dela.	102
Durabilt Steel Locker Co., Aurora, Ill.	130
Duro Metal Products Co., Chicago, Ill.	99
Electrimatic Corp., Chicago, Ill.	116
Evers Hardware Co., Denton, Tex.	
Fairbanks, Morse & Co., Chicago, Ill.	12–13
Fedders Mfg. Co., Buffalo, N. Y.	15–16
Gale Products, Galesburg, Ill.	115
General Controls Co., Glendale, Calif.	17
General Electric Co., Specialty Appliance Sales Div., Cleveland, Ohio	93–94
General Electric Co., Schenectady, N. Y.	51–52
L. H. Gilmer Co., Tacony, Philadelphia, Pa.	109
W. A. Hammond Drierite Co., Yellow Springs, Ohio	3
Heating & Ventilating, Chicago, Ill.	65
Henry Valve Co., Chicago, Ill.	103–104
Howe Ice Machine Co., Chicago, Ill.	112
Ideal Beer Cooler Co., St. Louis, Mo.	57
Imperial Brass Mfg. Co., Chicago, Ill.	112
Jarrow Products Corp., Chicago, Ill.	1A
Jewett Refrigerator Co., Buffalo, N. Y.	53
Kason Hardware Corp., Brooklyn, N. Y.	37
Kelvinator Div., Nash-Kelvinator Corp., Detroit, Mich.	58–59
Kerotest Mfg. Co., Pittsburgh, Pa.	97–98
Kold-Hold Mfg. Co., Lansing, Mich.	10–11
Marlo Coil Co., St. Louis, Mo.	154–155
Jas. P. Marsh Corp., Chicago, Ill.	119
McCord Radiator & Mfg. Co., Detroit, Mich.	
McIntire Connector Co., Newark, N. J.	129
Mercoid Corp., Chicago, Ill.	
Midwest Mfg. Co., Galesburg, Ill.	20–21
Mills Novelty Co., Chicago, Ill.	137–138
Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.	61
Modern Equipment Corp., Defiance, Ohio	4–5–6
Mueller Brass Co., Port Huron, Mich.	117–118
E. B. Muzzarelli & Co., Kansas City, Mo.	46
Nickerson & Collins Co., Chicago, Ill.	A
The Pacific Lumber Co., Chicago, Ill.	7
Peerless of America, Inc., Chicago, Ill.	123–124–125
Penn Electric Switch Co., Goshen, Ind.	95–96
Perfection Refrigeration Parts Co., Harvey, Ill.	81
H. A. Phillips & Co., Chicago, Ill.	34
Portable Elevator Mfg. Co., Bloomington, Ill.	92
Ranco, Inc., Columbus, Ohio	106–107
Refrigerating Engineering, New York, N. Y.	74
Refrigerating Specialties Co., Chicago, Ill.	54
Refrigeration Appliances, Inc., Chicago, Ill.	25–26
Rempe Co., Chicago, Ill.	60
Rotary Seal Co., Chicago, Ill.	153
Sanders Butcher Supply Co., Detroit, Mich.	23
Servel, Inc., Evansville, Ind.	38–40
South Bend Lathe Works, South Bend, Ind.	151
Spoehrer-Lange Co., St. Louis, Mo.	73
Square D Co., Detroit, Mich.	147–148
Superior Valve & Fittings Co., Pittsburgh, Pa.	126
Tecumseh Products Corp., Tecumseh, Mich.	127–128
Temprite Products Corp., Detroit, Mich.	100
The Texas Co., New York, N. Y.	121
Tyler Fixture Corp., Niles, Mich.	62
Universal Cooler Corp., Detroit, Mich.	131–132
Utilities Engineering Institute, Chicago, Ill.	79
Van Cleef Brothers, Chicago, Ill.	105
Victor Mfg. Co., Chicago, Ill.	120
Virginia Smelting Co., West Norfolk, Va.	108
Wagner Electric Co., St. Louis, Mo.	14
The Weatherhead Co., Cleveland, Ohio	149–150
White-Rodgers Electric Co., St. Louis, Mo.	63
Williams Oil-O-Matic Heating Corp., Bloomington, Ill.	122
Wolverine Tube Co., Detroit, Mich.	80
Zenith Carburetor Div., Bendix Aviation Corp., Detroit, Mich.	101

'ALL-INDUSTRY' EXHIBITION COMMITTEE

Chairman M. W. KNIGHT, Peerless of America, Inc.

HAROLD HULETT, General Electric Co.

K. B. THORNDIKE, Detroit Lubricator Co.

F. J. HOOD, Ansul Chemical Co.

A. B. SCHELLENBERG, Alco Valve Co.

Meet the Exhibition Committee Members

Members of the exhibition committee for the Second Annual All-Industry Refrigeration & Air Conditioning Exhibition are cartooned above in poses that reveal some of the things that are characteristic of them.

"Ringmaster" of the show, for the second straight year chairman of the exhibition committee, (by unanimous decree of exhibitors at the last show) is M. W. "Mel" Knight of Peerless of America, Inc. (far left). "Mel" is noted as a man who gets action, and as a guy who can "keep the show going." Always on the go, has a wide acquaintanceship in all branches of the industry. His charming wife, Ruth, again heads the women's entertainment committee. Last year she probably put in as much time at the exhibition as "Mel."

Harold Hulett (second from left) of General Electric Co.'s commercial refrigeration and air-conditioning department, is the representative on the committee from the Nema or "big company" group. Poised and even somewhat reserved in ordinary conversation, the able Mr. Hulett is dynamic when giving a talk, speaking with a tone of sincerity and earnestness that quickly wins over audiences. He makes good use of a blackboard in addressing a group, and those who were at the Refrigeration Equipment Manufacturers Association meeting at Turkey Run Inn will recognize, in the cartoon, his outline of the situation with respect to commercial refrigeration distribution.

K. B. "Spike" Thorndike (center) of Detroit Lubricator Co. is urbane, polished, a diplomat who serves equally well on the meeting floor or in hotel room suite conferences, and a man who is called in when a committee wants something "said right." His long-range vision on industry problems and trends and his "drive" have helped greatly to speed cooperative activity.

F. J. "Jim" Hood (second from right) of Ansul Chemical Co., smart young executive, and a man who has made it a point to know the refrigeration service man and his likes and dislikes. An all-around sportsman and good fellow, "Jim" has charge of the program for the All-Industry Banquet, which means that a lively time is assured. The yachting costume attests to the fact that "Jim" likes boating the best of sports, and those fish he has might be the famed "Marinette smelt" (yah, we know they don't catch 'em with a rod and reel).

A. B. "Art" Schellenberg (far right) of Alco Valve Co. is known and liked throughout the industry, from top executives to the rank-and-file. In addition to making an outstanding record as one of the youngest presidents of a company in the business, "Art" does a lot of serious thinking on industry matters, and while the "Sherlock Holmes" garb in which he is pictured attests to the fact that he once intended to use his training as a chemist in the role of an expert criminologist, and actually took the famed "crime prevention course" at Northwestern University, he now uses his magnifying glass to detect facts and figures about discount schedules and other industry problems.

Special Train Arranged To Bring West Coast Group To the Show

SAN FRANCISCO—Through arrangements completed by Clarence F. (Sandy) Pratt, president of California Refrigerator Co., refrigeration supply jobber in San Francisco and Oakland, industry men from the Pacific Coast again will have the opportunity to travel from their homes to the Second All-Industry Exhibition by special train.

Traveling and special sections of the "Challenger" train running between San Francisco and Los Angeles and Chicago, delegates to the show will leave those two cities at 8 p.m. on Jan. 11, join forces at Ogden, Utah, on Jan. 12 at 7:35 p.m., and arrive in Chicago together on the morning of Sunday, Jan. 14.

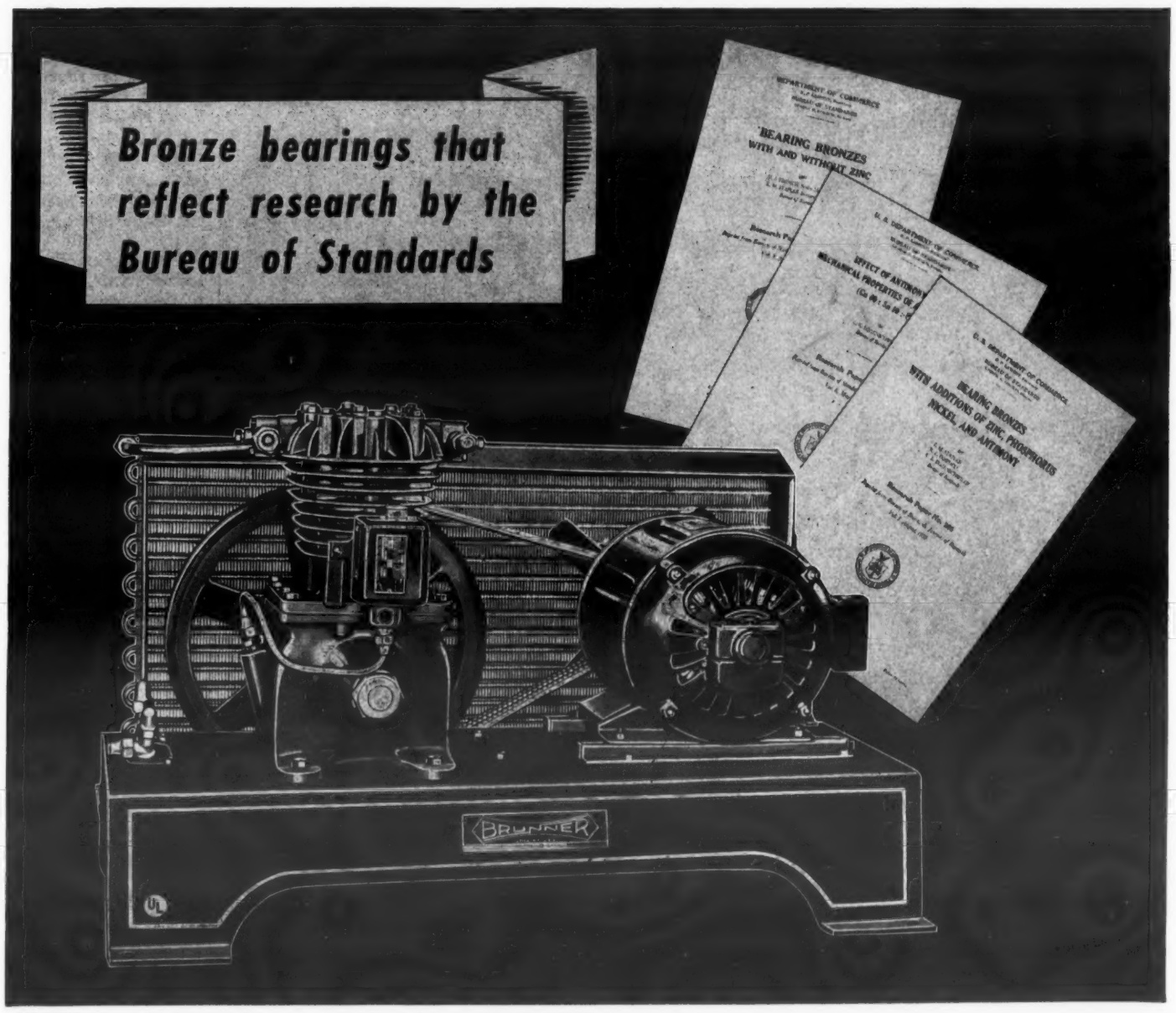
The delegates' train will make stops at Sacramento, Calif.; Reno, Winnemuca, and Elko, Nev.; Ogden, Utah; and Omaha, Neb. Rail fare from either San Francisco or Los Angeles to Chicago is $74, with Pullman fares of $8.95 for lower and $6.80 for upper berth, both ways.

California Refrigerator Co.'s delegates to the show will be Mr. Pratt and Jesse Rauch, vice president and refrigeration engineer.

Bus Refrigerator Keeps Riders' Lunches Cool

ST. LOUIS—Passengers on a bus line operating between St. Louis and Joplin, Springfield, and St. Joseph may now deposit lunches or fruits in a miniature refrigerator built under a rear seat.

The miniature refrigerators, built by Standard Appliance Co., also have four-gallon water coolers for serving ice water on long, warm-weather trips. They were built by the bus company after a number of complaints about the lack of water or cooling, such as trains feature.


Bronze bearings that reflect research by the Bureau of Standards
BEARING BRONZES WITH AND WITHOUT ZINC
BEARING BRONZES WITH ADDITIONS OF ZINC, PHOSPHORUS NICKEL, AND ANTIMONY
BRUNNER

Every Brunner Unit is tested for Underwriters' Laboratories Approval and Carries the U. L. Seal

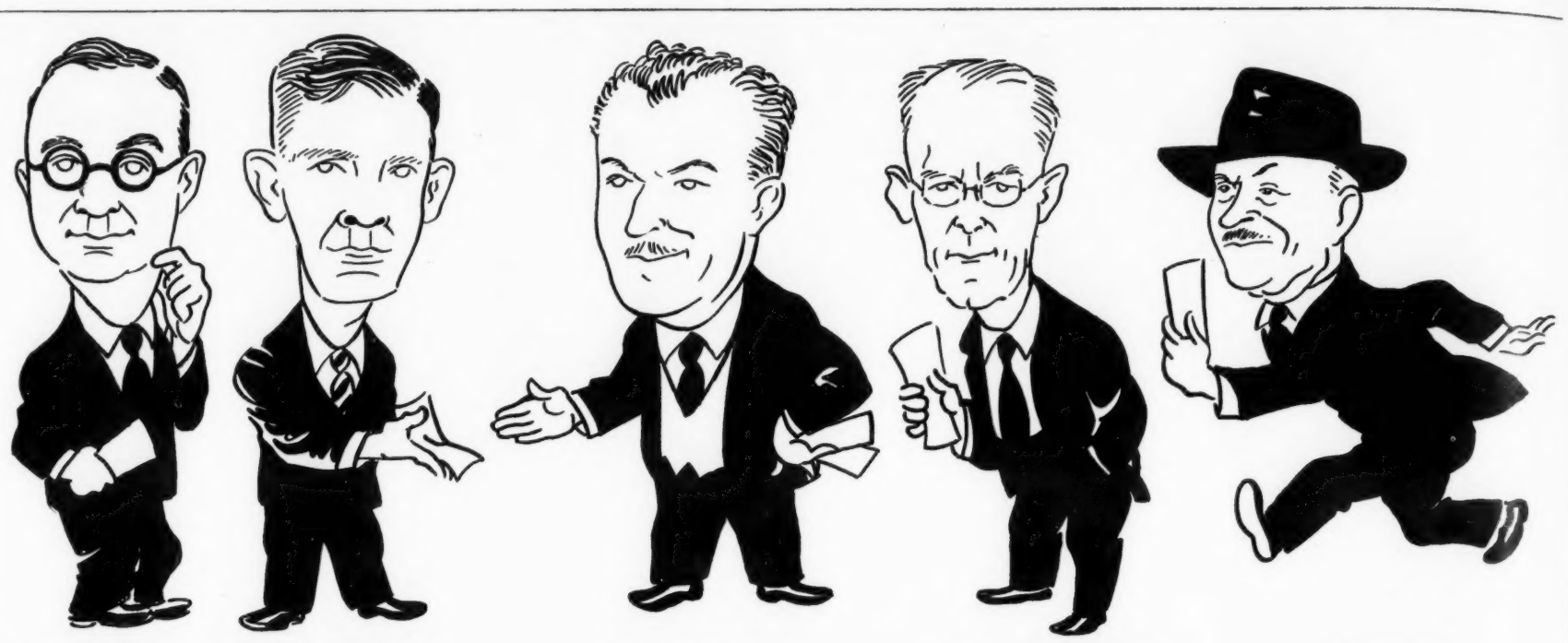
It is significant that Brunner refrigeration units are protected by bronze bearings at all rotating points. For here, viewed from the standpoint of long-time service, are vital points of construction . . . Not relying alone on their own knowledge of bearings, Brunner engineers carefully reviewed the research findings of the United States Bureau of Standards—the methods to improve the physical properties of bearings by alloying bronze with other metals. After extensive study and practical tests, the present Brunner bronze bearings were developed—exceptionally hard, tough, wear-resistant . . . This, you may say, is but a detail. We say: check *other* Brunner details of construction! Throughout the entire Brunner design you will find the same well-thought-out engineering, all pointing to that dependability for which the Brunner is recognized . . . Brunner refrigerating and air conditioning equipment includes air and water cooled condensing units from ¼ H. P. up to 15 H. P. for all types of installations. Catalog promptly on request. Brunner Manufacturing Company, Utica, N. Y., U. S. A.

The Symbol of BRUNNER Dependability

Air Conditioning Distributors, Contractors and Dealers Organize To

Chairman Keller Launches National Membership Drive

Local Councils Pledge Support



M. S. LEBAIR JESSE W. PAGE, JR. JOHN H. KELLER J. M. SPREKELMEYER BEN NATKIN

DETROIT — Encouraged by the enthusiastic replies (with checks enclosed) to the first call for funds, John H. Keller, chairman of the Temporary National Council, will soon start a nation-wide drive for Charter Memberships in the new National Air Conditioning Association.

The time has come to "pass the hat" said Mr. Keller in a recent letter to members of the Temporary National Council. "It will, of course, be understood that any advance payments made by local associations or individual firms will apply against such 1940 dues as may be assessed at the First National Convention to be held in the Stevens Hotel in Chicago, Ill., Jan. 15-18, 1940.

"After the meeting in Chicago last January," Mr. Keller continued, "F. M. Cockrell, publisher of AIR CONDITIONING & REFRIGERATION NEWS, offered to distribute a Bulletin, reporting the affairs of local groups and reflecting interest in the national movement. Five issues of this Bulletin have been released.

"In addition, Mr. Cockrell detailed Henry Knowlton of the editorial department of the NEWS, to travel extensively throughout the country, visiting local associations and getting their views regarding the national program. Altogether, the NEWS has expended approximately $2,000 in the interests of the association.

"It is obvious," Mr. Keller told members of the Council, "that we cannot continue to depend entirely upon an outside source of revenue if the association is to be successfully established on the right basis. At the present time we are interested in preparing a constitution and by-laws. Several members of the Council have requested that this be done, so that the organization may be well under way prior to the general meeting in Chicago next January.

"Preparation of a constitution and by-laws on the basis of a non-profit corporation will call for a certain amount of legal expense; postage and stationary is an increasing burden, and Council members cannot be expected to be 'out of pocket' for expenses incident to the operation of the association," Mr. Keller said.

Mr. Keller plans to distribute applications for Charter Membership which call for an advance payment of $10 on 1940 dues and which entitle one representative of each firm to full voting privileges at the First National Convention.

The application form provides that final approval of the application, and issuance of a Certificate of Charter Membership, shall be in consideration of the later endorsement of the Constitution and By-Laws with such Classifications of Membership and Schedule of Dues as may be adopted on completion of the permanent organization of the Association.

M. S. LeBair Sends $50 Check for Philadelphia

PHILADELPHIA—M. S. LeBair, manager of the York Ice Machinery Corp. branch here and member of the Temporary Council of the National Air Conditioning Association, recently assured John H. Keller, council chairman, of the support of the Air Conditioning Association of Philadelphia. He wrote:

"I am sufficiently assured of the cooperation of our group to take the risk myself of sending you a check for $50.00."

N. A. C. A. Movement Endorsed By Page In N. Carolina

CHARLOTTE, N. C.—Endorsement of the drive for members in the National Air Conditioning Association was given by Jesse W. Page, Jr. in a letter to members of the Air Conditioning Association of North Carolina, of which Mr. Page is president. The letter follows:

"As we are all aware, and fully realize, the air-conditioning business in North Carolina has been far behind many other sections of the country in its development and in getting general public acceptance as to its necessity.

"As we are also aware, up to this point, because of unstable marketing conditions and the variables which are constantly facing us in engineering and costing, our own State Association can be of great value to us.

"It would seem wise that we in North Carolina participate to the fullest possible extent in the activities of a National Air Conditioning Association so that we may participate and benefit from the knowledge and experiences of other distributors, dealers, and contractors in our business in every section of the country.

"Attached hereto you will find an application for charter membership in the National Air Conditioning Association. On the left-hand side of this application you will see the members of the temporary national council, all of whom are endeavoring to create a strong National Association, the culmination of which efforts will come at the National Convention to be held at the Stevens hotel in Chicago on Jan. 16, 1940.

"Please allow the writer to urge each and every one of you as outstanding members of our industry

(*Concluded on Page 9, Column 1*)

14 FEATURES that illustrate KEROTEST'S PROGRESSIVE DESIGN AND FINE CRAFTSMANSHIP

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2. Cap Stem and Handwheel may be removed as a unit.
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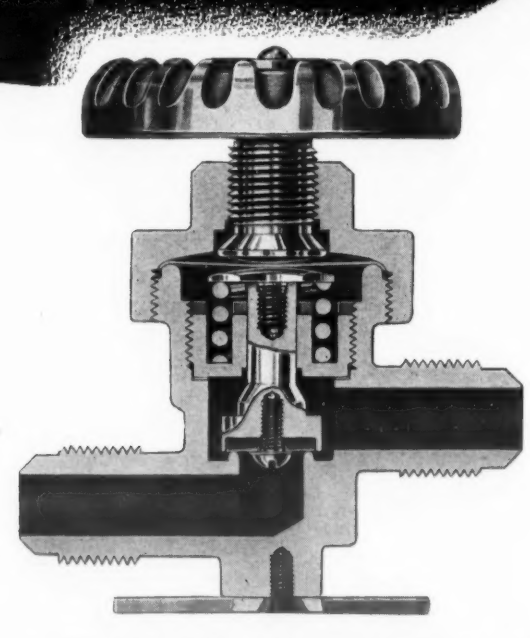

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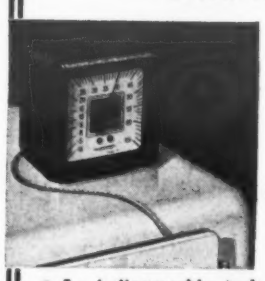

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Dealers Net Price $5.00
F.O.B. Chicago

• An indispensable tool; this Serviceman Temperature Indicator. Just unwind the capillary tubing and place the bulb at the point where temperature is to be determined. This remote reading feature permits tests and temperature readings under actual working conditions. Use it to "field" complaints, test switch action, check brine tanks and vessels and make many other tests that a pocket thermometer can't make properly. Ranges of —10°F. to +65°F. or —10°F. to +100°F. (minus 20° at slight price increase.)

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Dealers Net Price $18.50
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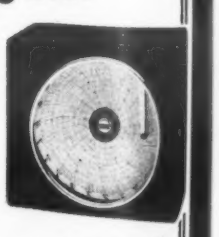

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Improve Trade Relations and Promote Better Practices

(Concluded from Page 8, Column 5)

in the State of North Carolina to send in your application for Charter Membership, attaching thereto your check for $10 which will be a great help in the financial struggle a young association of this kind is naturally having.

"In order that the officers of the North Carolina Association may be aware of your definite application, will you kindly notify the secretary, S. A. Sigler, Air Conditioning Corp., Greensboro, N. C. of your acceptance and the rendering of your check if your decision is favorable, which we sincerely trust it will be."

JESSE W. PAGE, JR.

Natkin Recommends Charter Membership To K. C. Firms

KANSAS CITY, Mo.—Support of the National Air Conditioning Association was urged here last week by Ben Natkin, president of Natkin & Co. in a letter to John H. Keller of Detroit. The Natkin firm was one of the first concerns to forward an application for Charter Membership in the National Association.

At the same time, Mr. Natkin advised Mr. Keller that he was "Forwarding copies (of the membership application blanks) to nine other firms in Kansas City, with the recommendation that they join the organization."

St. Louis Sends $50 Contribution to the N.A.C.A Fund

ST. LOUIS, Mo.—Local air-conditioning distributors and contractors were among the first to contribute toward the formation of the National Air Conditioning Association, according to S. J. Shure, manager of the local office of Natkin & Co. here.

Mr. Shure reports that a check for $50 was sent to John H. Keller, chairman of the Temporary National Council, made up from contributions from St. Louis contractors sympathetic to the movement.

'Join Association' Says F. A. Hessick, Washington, D. C.

WASHINGTON, D. C.—Fred A. Hessick, president of Combustioneer Corp. and member of the Temporary National Council, urged members of the Washington Air Conditioning Association to join the National Air Conditioning Association in a recent letter to members of the local organization. Mr. Hessick is also president of the Washington Association. Stating his belief in the national movement, Mr. Hessick said:

"I personally think that the problems confronting the air-conditioning industry, due to the many changes that are bound to take place from time to time, should justify forming a national association.

"I am heartily in support of such an association, and trust that you will see your way clear to join it.

"I am enclosing a blank for this purpose, and I hope that you will fill in same and send check to John H. Keller, Chairman, Detroit, Mich."

The letter was sent to Perc Erisman, Washington Refrigeration Co.; Horace Ashton, Hudson Air Conditioning Corp.; Maurice Firestone, United Clay Products Co.; Walter Phillips, Griffiths Consumers Co.; L. L. Gritson, United Equipment & Supply Co.; and A. P. Woodson, A. P. Woodson Co.

Fort Worth Says: 'Heartily Endorse The National'

FORT WORTH, Tex.—Endorsement of the program for a National Air Conditioning Association was recently given by the Fort Worth Air Conditioning Association, according to J. M. Sprekelmeyer, president. In a letter to John H. Keller, chairman, the association pledged its financial support to the movement, as follows:

"Certainly our association has been aware of the expenses involved in organizing the proposed National Association and we have wondered from time to time how it would be financed. Your letter was discussed at our last meeting.

"Our secretary was absent on his vacation but our association went on record as heartily endorsing the national movement. They further voted that we mail you a check as soon as our secretary returns. You can, therefore, expect to hear from us in about two weeks.

"Thanking you for your letter and also for the interest you have taken in the national association.

The Fort Worth Air Conditioning Association."

Michigan Group Votes To Join New Association

DETROIT—Members of the Air Conditioning Association of Michigan voted to support the National Air Conditioning Association on the basis of individual memberships, at a recent meeting here. Concensus expressed by members was that each firm should join the National Association, but that the local association should be represented at national meetings by one accredited delegate.

Other suggestions made by members of the Michigan Association were that national dues be paid quarterly and that local associations be used insofar as possible as medium for the collection of dues.

The group voted to support the national association movement in response to a letter from John H. Keller, National Council chairman, which was read at the meeting. Mr. Keller is also current president of the Air Conditioning Association of Michigan.

The group participated in a joint meeting on Oct. 12 with the American Society of Refrigerating Engineers and the American Society of Heating & Ventilating Engineers to discuss the proposed Ventilating Code for the City of Detroit.

Program of the First Annual Convention National Air Conditioning Association

Hotel Stevens, Chicago, Jan. 15-17, 1940

Monday, Jan. 15—6:30 p.m.—Dinner Meeting of the Temporary National Council. Approval of charter membership applications.

Tuesday, Jan. 16—10 a.m.—Meeting of Charter Members. Report of Progress by John H. Keller, national chairman. Reports of chairmen of local councils. Roll call of charter members. Presentation of proposed constitution and by-laws. Appointment of nominating committee, resolutions committee, etc.

2 p.m.—Open Meeting. Everybody Invited. Report of Temporary Advisory Publicity Committee. Presentation of proposed cooperative program of trade and public education and market development by Paul B. Zimmerman, Grace & Bement, Inc., Detroit. General Discussion.

6:30 p.m.—All-Industry Banquet. (All visitors invited.)

Wednesday, Jan. 17—10 a.m.—General Meeting. Report of Committees. Election of Officers and Directors.

1 p.m.—Luncheon Meeting of Officers and National Council.

2 p.m.—General Meeting. Discussion of 1940 program.

NACA Temporary National Council

John H. Keller, *Chairman*,
Mechanical Heat & Cold, Inc.
Detroit, Michigan.

Ben Natkin, Natkin & Co.
Kansas City, Mo.

Alfred Epstein,
Independent Refrigeration Co.
Los Angeles, Calif.

C. E. Hansen, Smith & Oby Co.
Cleveland, Ohio.

J. N. Spreklemeyer,
General Engineering Corp.
Fort Worth, Tex.

A. J. Mitchell, Straus-Frank Co.
Houston, Tex.

M. S. LeBair,
York Ice Machinery Corp.
Philadelphia, Pa.

Walter P. Davis,
Buffalo & Niagara Power Co.
Buffalo, New York.

Fred A. Hessick, Combustioneer Corp.
Washington, D. C.

J. Ralph Smith, Combs Lumber Co.
Lexington, Ky.

Jesse W. Page,
Page-Williamson, Inc.
Charlotte, N. C.

Carl Bimel, The Bimel Co.
Cincinnati, Ohio.

Norman H. Gay,
Gay Engineering Co.
Los Angeles, Calif.

Charles E. Tupper,
Charles E. Tupper Co.
Minneapolis, Minn.

George M. Sebree,
Western Air Conditioning Co.
Omaha, Neb.

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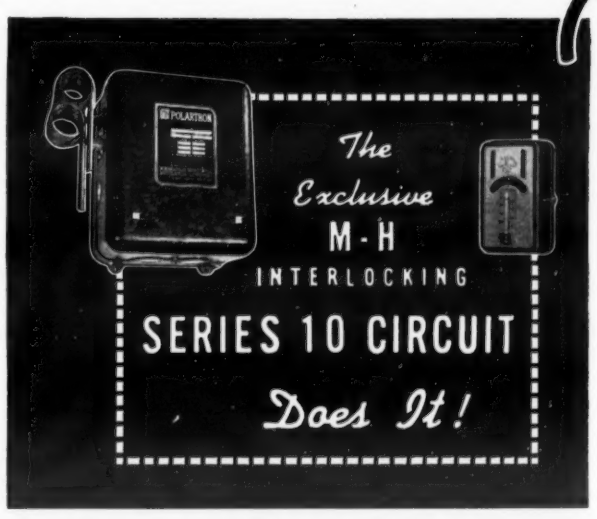

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4 · Provide their own pressure connections.
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6 · Give greatest protection against short-cycling.
7 · Protect your motor in case of power failure.
8 · Give an extra load circuit on polyphase work.
9 · Increase your original profit.
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11 · Let your compressor be applied to the new Polartron System of Refrigeration Control.

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Polartron System Gives Your Customers:

1 · Economical operation.
2 · Less shrinkage and trimming.
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Customer Builders . . . .

Trouble-free drives because they are built for steady service. Exclusive construction—endless whipcord strength member completely floated in rubber and placed in the neutral axis—resists destructive internal heat, stretch and side-wear. Thus, they remain flexible, strong, smooth running, noiseless.

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Supply Jobber Has Function In Making Parts Distribution Less Costly & Faster, Says Joe Oberc

'WE WERE PIONEERS TOO,' ASSERTS DETROIT JOBBER IN ANSWERING CHARGE THAT HIS GROUP 'MUSCLED IN'

Price 'Chiseling' & Reckless Discount Giving Real Causes of Industry's Ills, He Tells Manufacturers

By Joe Oberc, President, J. M. Oberc, Inc., Detroit

In calling recently on an executive of a large refrigerating machine manufacturing concern, I and the rest of the jobbers in the United States were charged and accused of being misfits, a bane in the industry, etc., thriving on the seeds planted by the pioneers of the refrigerating machine industry.

This severe criticism reflects only bitterness and a very poor analysis of the change of times and methods of distribution in the industry. I should like to dismiss this rash and unwarranted criticism with the statement that I do not feel, nor did I ever feel that the experience and knowledge which I gained in the industry prior to entering the wholesale jobbing business should terminate with the severance of my association with a small machine and refrigerator manufacturer where I was employed from 1922 and including a part of 1929. I often wondered what this particular person planned on doing when his position was terminated.

This incident is recalled merely to indicate to you gentlemen that there always was and probably always will be opposition to those engaged in this division of the industry. In spite of this, we have forged ahead to the extent of sales amounting to close to $15,000,000 annually. This certainly is an indication that the wholesale refrigeration supply jobber must be rendering a service.

In order to emphasize the justification of our existence I am going to ask you to bear with me in reciting our own company's history. Believe me when I say that this reference is made since it parallels the history of many of my friends who are associated with me in a like line of endeavor throughout these United States and a number of foreign countries.

After having left the employ in 1929 of a machine and refrigerator manufacturer, I became associated with F. B. Riley and Associates, and under the direction of F. B. Riley, with whom many of you are acquainted, I was afforded a splendid opportunity to contact the machine and refrigerator manufacturers in the capacity of sales representative. Following the blow of depression which all industries experienced, we were swept with the tide, and in October, 1933, I decided to enter the refrigeration supply business.

As one of the pioneers in the wholesale refrigeration supply jobbing business, my decision to enter this field was predicated on the fact that there was nothing I knew or liked better, and I felt that I was part and parcel of the industry. Also I felt that there was a very definite need for a modern, well financed, and well managed and efficient wholesale source of supply to offset the cumbersome, costly, and inefficient method of caring for the needs of the distributor, the dealer, the commercial and air-conditioning contractor, the small manufacturer, and the service engineer on **such devices as a manufacturer of necessity handled on a jobbing basis and which goods he purchased in the open market**—since he did not produce them himself.

Wholesaling is one of the major segments of the modern business structure. While I could not locate late statistics, yet I was able to ferret out figures for 1929, which indicate that the wholesalers handled 30.8% of the total sales of manufactured products. Wholesaling occupies a strategic position in the distribution of goods and furnishes the battleground for the competitive struggle now in process, the goal of which is a more efficient marketing system.

Wholesale jobbers have been looked upon with disfavor in this industry. This has been justified to some extent by the looseness of jobber standards or requirements, and the reckless appointment of jobbers, as well as reckless wholesale price extensions to persons not entitled to these prices, by members of the Rema group.

Present Definition of Jobber Is Attacked

We need a revision of the standards or qualifications of a wholesale jobber, and a closer investigation by the manufacturer of parts of prospective wholesale jobbers before extending wholesale prices. Also, there is a definite need for complete investigation and verification of every trade classification before making quotations.

You have the ability, if you only wished to exercise it, to classify any operation. When in doubt, why not hold your quotation in abeyance, rather than enter into a contingent arrangement—which always is difficult to adjust. It is not difficult to determine the classification of any account if the will for proper classification exists.

As an example, I wish here to quote some decisions rendered in our courts on classifications of wholesale jobber operations—definite decisions which are available to you.

In making these citations, I assume that all of those present sell through the jobber—and I quote:

1. **The quantity of goods bought or sold:** On Nov. 10, 1915, the U. S. Circuit Court of Appeals, The Great A & P Tea Co. vs. The Cream of Wheat Co. ruled that while a wholesaler usually buys in comparatively large quantities, it is the character, not of his buying, but of his selling that marks him as a wholesaler.

2. **The method of operation of the selling concern:** Wholesalers maintain offices or warehouses which are not open to the general public. They maintain a sales force which calls upon their clients and secures orders. They extend credit and make collections on a basis which is quite different from that followed by non-wholesale dealers.

3. **The nature of the goods:** Close examination of business methods indicates position, as is described in the above decision.

4. **The use made of the product:** The motive of the purchaser. Buyers are separated into two classifications, those who buy for their own use and those who buy for re-sale or for business purposes.

5. **The motive of the purchaser:** On this basis a wholesale transaction may be defined as any transaction in which the buyer does not buy for his own use, but is actuated by a profit or business motive in making the purchase.

Wholesaling includes all marketing transactions in which the purchaser is actuated solely by a profit or business motive in making the purchase.

Retailing includes all marketing transactions in which the purchaser is actuated solely by a desire to satisfy his own personal wants or those of his family or friends, through the personal use of the commodity or service purchased.

Please note that March 13, 1923, the Mennen Co. vs. the Federal Trade Commission, in the same court, the same decision was handed down.

I should like to give you my interpretation of the functions of a wholesale refrigeration supply jobber for your serious consideration. In making appointments and taking these points into consideration, you will get better representation and better recognition for the jobber. It follows:

Oberc's '10 Points' To Qualify a Jobber

1. To maintain and warehouse an adequate stock of standard commodities sufficient to supply the trade.

2. To maintain a showroom to properly display commodities for the benefit of the trade.

3. To maintain delivery service and facilities for pick-up service.

4. To maintain a selling organization trained to promote, specify, and quote on refrigeration commodities and to properly handle matters of service or misunderstanding with customers.

5. To be prepared to furnish promptly a great variety of refrigeration commodities in one order at a minimum of cost and with the greatest convenience to the trade.

6. To advise the trade regarding the most suitable and reliable commodities to purchase and to install.

7. To distribute catalogs showing and describing the most essential items in common use in the industry.

8. To extend justified credit to the buyers within his territory upon reasonable terms.

9. To cooperate with the manufacturer in faithfully representing him and his company and assist in manufacturers sales promotion plans.

10. To respect and carry out suggested re-sale schedules.

Since the wholesale jobber combines within his warehouse and his sales, service and credit organization, the functions above named for a large number of manufacturers, he provides these facilities at the lowest possible cost consistent with the service rendered, and produces a true economy in distribution, the justification of which accrues to the buyer or trade and to the manufacturer.

Wholesale jobbers should be geared for service. Close at hand should be rows upon rows of bins carrying stock, quick stock, current stock, not carload lots, warehoused for delivery to the trade tomorrow, or today, or to be rushed out on phone call or salesman's orders received in the mail.

The manufacturer and the trade are entitled to the service for which they pay the wholesale jobber in profits.

Today the wholesale jobber function is more necessary than ever before, and it is entitled to profit for the service rendered. But the

(Concluded on Page 11, Column 1)

JOE TELLS 'EM

ORATOR JOE M. OBERC

The rapid growth of the refrigeration and supplies wholesaler has resulted in attitudes of surprise, bewilderment, and even resentment from some branches of the industry. Although the jobbers have been functioning for a number of years, there are still some who do not see just where they fit into the business.

Joe Oberc, Detroit jobber, typifies the origin and growth of the jobber perhaps as well as any one individual who could be named, and he has a gift of saying just what he means when he gets up to talk. His talk before the Refrigeration Equipment Manufacturers Association's recent meeting, published here, is a masterful exposition of where the jobber fits into the picture, and why. In addition, Joe showed up with a bagful of oratorical tricks which, he claimed, were the result of "six lessons in a night-school public speaking course."

HENRY'S HUNTING SONG

(To the tune of "The Man on the Flying Trapeze")

If when hunting for orders, more sales you'd complete,
Go gunning with Henry and you can't be beat!
Henry leads in design and is priced to compete,
And insures you more profit each day.

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You'll increase your sales with the greatest of ease,
Your trade—with these products—you're certain to please,
They'll sing forth your praises with "Oh!"s, "Ah!"s and "Gee!"s,
It's a cinch to bag orders this way.

HENRY

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Most Complete Line of Refrigerant Valves, Dehydrators and Strainers — Also Valves and Forged Steel Fittings for Ammonia and High Pressure Industrial Requirements

'Jobber Can Enter Any Establishment In the Industry With Head High'—Oberc Tells Why

(Concluded from Page 10, Column 5)

wholesaler who applies warehousing and order-taking distribution practices in place of aggressive merchandising methods, or who dissipates his aggressiveness on salt, pepper, and sugar items, is not only doing himself an injustice but imposes an equal handicap upon the factory and the retailers he serves.

By the same token, the manufacturers sales executive who attempts forcing his products through types of wholesalers who are not organized to give adequate marketing services, is committing the same kind of fallacy.

Gentlemen—does this not parallel our operations? Is not the proper spirit and faith here expressed? Your answer can only be yes! Then—for goodness sake why don't we use this formula as a yardstick in our industry?

I am not in accord with the qualifications of a jobber as set up by the National Refrigeration Supply Jobbers Association. The spirit is there, but an improper interpretation is placed upon the requisites or qualifications. Members of the Rema group look apparently only to one of the qualifications, which will give them a multiplicity of representation, and that is **"that the applicant does no service work."**

There is too much importance placed on this interpretation, and it is undoubtedly the least important. This is not only my thought. It is confirmed by a quotation which I should like to make from a letter by R. W. Burton, acting executive secretary of our association. I doubt very much that he realized how complete his analysis is of the trouble in our jobbing and refrigeration industry. I quote:

"Knowing that you are sincere in your desire to cooperate with the members of the Jobbers' Association, we are reminded that most of the refrigeration supply manufacturers here in the States check the operations of all prospective jobbers very closely with respect to their **service activities** and **their dealer** hook-ups, and usually make their decisions on these points, **regardless of what their credit standing may be. Frankly, probably more companies with good credit standings are denied jobbing connections than are given them.** While good credit is an all important thing, **it never is regarded as a major factor by refrigeration supply manufacturers here in the States in making a decision on granting or declining a jobbing status."**

'Closed Industry Would Retard Developement'

There is a very definite need in the industry for a wholesale refrigeration supply jobber.

All of the members of Rema are not blessed with business from members of the Nema group. Yet your products are good and there is a demand for them. Some of you are listed as a second or third source of supply, but this is not going to keep the rust off of your machinery and equipment, pay for taxes, and carry the necessary overhead or burden in anticipation of being called on in an emergency. Some members of Rema were once "first choice," and competition has placed you down the line.

Certainly you are not going to fold up your tent and crawl into a hole. If you are progressive, you will strive to improve your products, reduce costs, and carry on to the end that you will again share in the business which you once enjoyed. In the meantime you can't close shop.

Then there is the **new** concern, who may have the best product in the industry, but cannot get **"in."** You must have an outlet. You can't wait until manufacturers change models. They too have to go through the necessary period of experimentation and adapting your product to their completed assembly.

But you can't stand still in the meantime. Progress just will not be stifled. Markets need not be closed to new concerns having new products. All concerns have had a beginning somewhere. You need no longer be shelved, or fall, or pass into decadence. There is a market for you if your products are good and priced right, and afford the wholesale jobber a profit.

All of these points are brought out to emphasize the important place the wholesale jobber fills in the industry.

It was never intended that this be a closed industry. Do you think that if the business was confined to two or three large refrigerator manufacturers, you would have had the development, and improvement in products which we witness today?

The success of any enterprise depends upon competition—good competition, and products at prices that will make for greater production and greater distribution of the products—all of which adds to the comforts of our every-day living. There is room for all of us in the industry, and I believe that wholesale jobber is indispensable.

As in other lines, there is a diversity of opinion as to methods of distributing refrigeration supplies, and it is a good thing that this condition exists. Among the Rema group there are persons and firms not altogether sold on distributing their products through recognized wholesale refrigeration supply jobbers, and vice versa. Thank goodness the former are in the minority.

Among the Nema group there are those firms who think it best to continue in the capacity of wholesaling or jobbing purchased parts to their distributing organizations, while others in this group have endorsed and recommended the wholesale refrigeration supply jobber to their distributing and dealer organizations.

'Super-Jobbers' & 'Chiseling' Draw Speaker's Fire

Then again we have the group who should like to act as super-jobbers, selling purchased parts to their distributing organizations at the same prices quoted by Rema to the wholesale refrigeration supply jobber and at a profit to themselves. And there is still another group that intercedes for its distributing organization with the Rema group to sell parts and supplies to these distributing organizations at wholesale jobber prices—at no profit to themselves. All of these plans shall have to be tried and time tested.

The members of the National Refrigeration Supply Jobbers Association shall have to await the results of these experiments—although we feel that through our establishments we offer the fastest and most economical service at popular prices.

There is going to be considerable friction between the different schools of thought, and it is up to you to decide which of these methods of distribution is going to be the most advantageous to you—but for goodness sake don't try to carry water on both shoulders. Take a definite stand on the matter and let your policies be known.

If you are out on the firing line every day, you hear nothing but complaints from the various selling organizations about chiseling and the rottenness of conditions existing competitively. Chiseling is running rampant and the extension of advantageous prices by certain manufacturers to their distributing organizations—and in many instances to wholesale refrigeration supply jobber prices is not helping control a very serious field illness.

A responsible, well thought of, and dignified jobber will carry on. He is not in competition with his customers. He is and will be in a position to be called in to advise, to quote, and to figure installations by any trade factor without violating the sanctity of his customers. He will be at an advantage in that he can continue to enter any establishment in the industry with his head high, and by this I mean that no distributor of a national refrigerator manufacturer is going to take into his confidence a competing house.

No trade factor is ready to forsake the modern and efficient, and friendly service he has been enjoying during the past eight years, and go back to the old inefficient method of purchasing parts or accessories from a refrigerator manufacturer with consequent delays, etc.—unless, of course, it be a matter of price.

I cannot make myself believe that the national refrigerator manufacturer is more interested in selling accessories, which he must purchase in the open market, than he is in selling the product of his manufacture—which is the field he entered at the inception of the business.

Distributors and dealers are sales organizations interested in selling appliances—and not accessories or parts, and they always will prefer to purchase from the wholesale jobber standard open market items—items which they have purchased for years contrary probably to the recommendations of their parent company—because many of them have had actual field experience and are today satisfied with the products which bear no direct relation to the final assembly. They are acquainted that frequently a manufacturer recommends certain devices only because his margin of profit is greater—and not because of superiority of products.

A distributor is not necessarily franchised to sell an expansion valve, a roll of tubing, etc. His franchise calls for a device or appliance, and it is to the sales of these commodities latter mentioned that a manufacturer looks—and not to how many flare nuts were sold or bought by the distributor or dealer.

The old plan of distributing purchased parts was and is costly. It means heavier inventories—obsolescence. It means lost motion—all of which has been eliminated with the advent of the refrigeration supply jobber.

Just what has brought about this discussion and grave concern of **"this parts distribution problem."** There are many answers and opinions on this, and I should like to express my own.

Chiseling by selling organizations, and endeavor on the part of certain manufacturers of completed refrigerating equipment to place their field organization in an advantageous position. That is about as plainly as I can state it. Any—everybody is doing it, or trying to do it, and this is but natural! Everybody seems to be hungry for business—at any price, profit or no profit. Price is being sold down the street, and not quality, nor service.

Wants Prices on Basis Of How Goods Are Used

The establishment of prices to all trade factors dependent upon purpose for which they are sold, quantities, etc. and the establishment of proper sources for resale of commodities not entering into the production of a finished device, will certainly tend to eliminate and stamp out the root of the evil existing in our industry. Everyone seems to be determined to place his organization at an advantage by calling him this or that, when in reality his function, or rather his true function is being concealed. How long can this condition exist under the stringent rules of **fair competition?** This applies to all producers of finished products and members and non-members of the Rema group.

You can and will get the support of all trade factors if you will only exercise business and common sense judgment in the selection of your representation or wholesale refrigeration supply jobber. The jobber cannot and will not get this recognition with conditions prevailing.

The jobbing end of the industry is a very definite business enterprise and should comprise only persons or firms with a good standing in their community with a knowledge of the business, with sufficient capitalization, and a purpose to render a service. The promiscuous extension of wholesale jobbing prices to certain favored distributors acting in a dual capacity, the appointment of some fly-by-night questionable person, the dispensing of products using peddler means, will never place the reputable jobber and your products in the position they rightfully are entitled to.

I actually sometimes feel that there is a movement afoot to ruin everything that so far has been accomplished in this business. This is not a sideline business.

A manufacturer cannot render the same service as a jobber. It was this fact that opened the way for jobbers in the first place. How then can the manufacturers expect to go back to a practice that proved detrimental to refrigeration years ago? Selling through jobbers has also resulted in lower prices to the entire distributing field and helped to promote sales that never would have been made otherwise.

Your jobber should be in a position to serve every trade classification in the industry, except probably the national refrigerator manufacturer—and even this latter classification if he be competent to give you honest and economical direct factory representation.

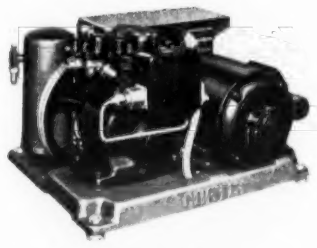
You know the ills existing in the industry. We've talked about them now for four years. You know better than anyone wherein your sales policies could be strengthened to ameliorate the deficiencies and inequalities in this business. Why not now resign yourself to the task of having your companies' policies so amended that our mutual interest (that of your company, your jobber, and your trade) will be better served?

93 Condensing Units from 1/6 to 30 H. P.

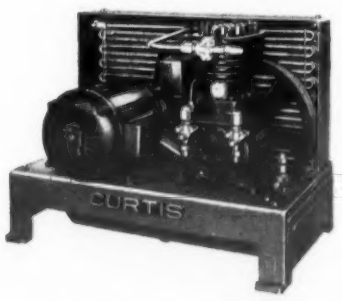
CURTIS REFRIGERATION AIR CONDITIONING and COMMERCIAL

Unit Coolers and Evaporator Coils.

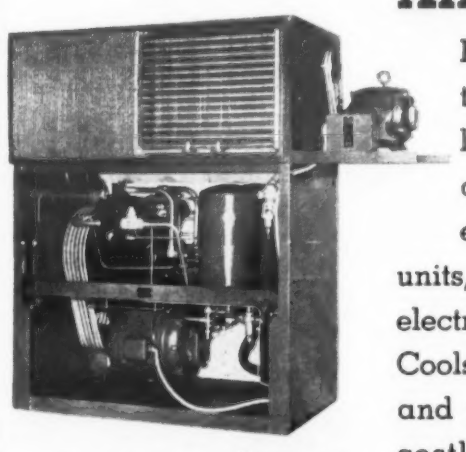
For Every Refrigeration and Air Conditioning Requirement



1/6 to 3/4 H.P. Self Contained Condensing Unit.



1½ H.P. Air Cooled Condensing Unit. Other sizes from 1/4 to 5 H.P.



7½—10—15 ton Complete Remote or Central Type Air Conditioner.

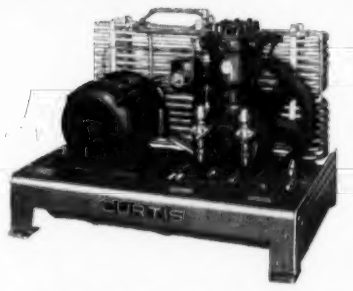
Commercial Refrigeration

48 air cooled condensing units from 1/6 to 5 H. P., inclusive, and 45 water cooled units from 1/3 to 30 H. P., inclusive. All models available for either Freon (F 12) or Methyl Chloride. Mechanical advantages include Timken Bearings, Centro-Ring Positive Pressure lubrication.

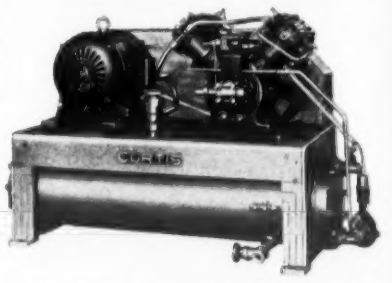
Special models are available for ice cream, frozen food cabinets and for the dairy industry.

Air Conditioning

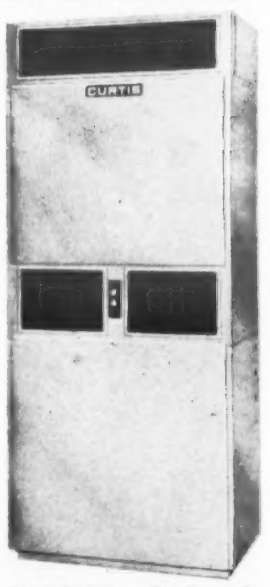
For stores, offices and all types of commercial establishments Curtis offers complete packaged, refrigerated air conditioning units, requiring only water and electrical connections to install. Cools, dehumidifies, circulates and filters the air. Eliminates costly installation expense. Adaptable for heating.



5 H.P. Water Cooled (Counterflow) Condensing Unit. Other sizes from 1/3 to 5 H.P.



15 H.P. Cleanable Shell and Tube Condensing Unit. Other sizes from 3 to 30 H.P.



3 and 5 ton Packaged Type Air Conditioner.

Curtis Refrigerating Machine Company

Division of Curtis Manufacturing Company

Established 1854

1912 KIENLEN AVE. ST. LOUIS, MISSOURI

Profitable Sales Ideas

'Free-Lance' Salesmen Can Get Business Where 'Regulars' Fail, Dealer Finds

By Robert M. Price

SCRANTON, Pa.—So "birddogs" are the lowest form of appliance salesmen, eh? So they can't produce? Samuel Barton, Westinghouse dealer here, will give the birddog critics an argument any old time, for he has found that his now-you-see-me-now-you-don't canvassers ring the bell where regular salesmen miss.

Success of such a plan naturally depends on the territory in which you work, says Mr. Barton. Through 25 years in business he has come to know his territory pretty well. In his business dealings he has come in contact with all kinds of salesmen, which he describes as "free lance" sellers.

These men have canvassed the district for many years selling everything from rugs to nut crackers. They know their market, and they know their customers. In selling their wares they can very often discover that a customer is in the market for an appliance. They turn in the leads to the Barton store.

Mr. Barton then gets on the trail. He does all the follow-up himself because it is necessary to carefully check the credit of the prospect and to present some sales arguments that will clinch the deal. If the credit check holds water after a prospect is traced down and the deal set, the free lancer who turned in the lead collects a 10% commission.

Asked how he gets his salesmen, Mr. Barton explained that one salesman tells another. These itinerant salesmen have a fraternity of interests, he said, that has one "turning over a good thing" to his brother of the road of sales. At the present he has about twelve men who are on the constant watch for appliance prospects. Selling their many different wares they get into all classes of homes and turn up prospects that would be impossible to dig up in any other fashion.

Talking to one of these salesmen is an experience in sales psychology. One man questioned revealed that he had been on the road for many years. He has had the same customers for years. He knows all the angles of sales and while he may not be considered the smoothest article in the sales game he gave proof that he knew his market and his customers down to the last word. He said that many of those who turned in appliance leads as he did worked on the same principle of knowledge of people and their wants and needs.

From his furniture, medicine, clothing, and whatnot salesmen, Mr. Barton has built up a real sales organization. Now he would not employ a regular salesman on a salary. From his free lancers, he says, he gets more good leads at far less expense. He alone acts as the balance and check and has proved that birddogs can be trained as paying sales retrievers.

New-Business Scouts Turn Up 534 Leads

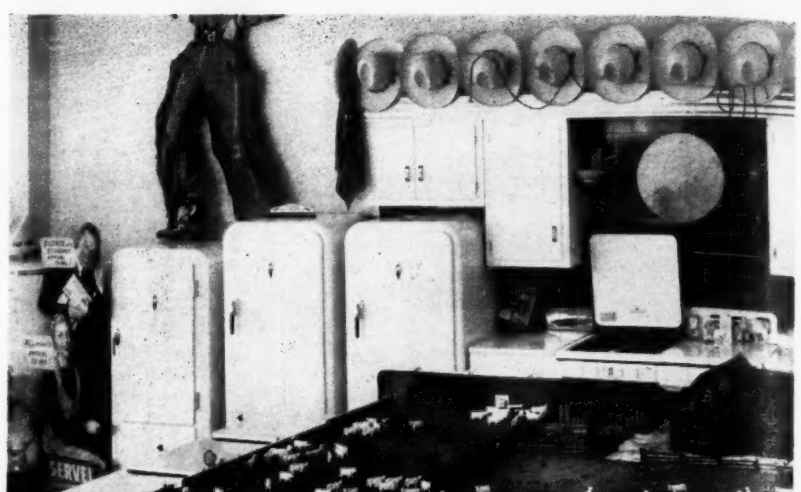
OMAHA, Neb.—First reports of the 113 Nebraska Power Co. salesmen and the 12 home service girls who are calling on every customer of the utility to find appliance prospects for dealers indicate that plenty of business will be uncovered.

In Omaha and Council Bluffs, Iowa, they made 10,100 calls in the first 11 days of the "Mutual Opportunity" campaign. They received 583 requests for home service on the use of electrical appliances and lighting. They found 275 home appliances out of repair and on the shelf.

They reported 534 live prospects for major appliances, and these leads were turned over to dealers for sales follow-up. They found 691 home owners who were interested in owning more small electrical appliances.

Dealers are being urged to jump on this list of prospects.

Corraling Sales In the Range 'Round-Up'



This miniature cattle ranch was used to tally refrigerator and range sales in Florida Public Service Co.'s recent campaign. As sales were closed, the cattle were transferred from the "open range" to the salesman's individual "corral." White cows denoted refrigerators, brown cows ranges.

* * *

'Homecoming Service' For Regular Winter Visitors Builds Sales and Goodwill For Florida Firm

ORLANDO, Fla.—A unusual service which has won the approval—and business—of winter visitors to Orlando and Central Florida is the forwarding to prospective visitors from the North a welcoming letter by H. Stuart Johnson, sales manager of the commercial department of Florida Public Service Co., Servel distributor for Central Florida.

The letter extends the invitation with the following words: "We sincerely hope that you are planning to carry out your annual custom of spending at least a portion of the winter months with us in Central Florida."

Enclosed with the letter is a card which the prospective visitor may return at no cost, giving him opportunity to advise of impending arrival and offering a no-cost inspection and conditioning of his Servel refrigerattor, which may have been turned off during the absence of the owner.

The friendliness and courtesy thus shown has been returned many times over in sales of new refrigerators and other appliances, Mr. Johnson says. "Sometimes we get some unusual requests," he advises. "In addition to a request for the refrigerator service, we often get a request to have groceries, milk, and even medicines delivered upon arrival of the winter visitor."

To boost sales of "Magic Chef" ranges, gas refrigerators, and other appliances during the summer, Florida Public Service Co.'s commercial department installed a unique score board to keep check on individual sales records:

A miniature cattle ranch was built in the showroom, with tiny white and brown cattle distributed over a miniature "open range." Each salesman was assigned a corral. When a salesman rang up a sale of a refrigerator, a white cow was taken out of the "open range" and placed in the salesman's corral. A brown cow recorded the sale of a gas range.

The novel arrangement not only spurred the salesman to boost his sales, but the "range" attracted a great deal of public interest, Mr. Johnson says.

Letting Customers Help Pick Branch Store Site Gets Dealership Off To Fast Start In Sales

DALLAS, Tex.—Letting customers help select the location for its new branch store has proved a major factor in putting this operation of W. A. Green & Co. on a going basis from the day it was opened, in the opinion of Ray Hill, manager of the major appliance department.

As a result of a poll of some 2,500 persons, most of them housewives, the store chose a site at McKinney and Fitzhugh Aves., easy for customers to get to, and—more important—convenient to get around from on hurry-up service calls.

One of the most interesting observations made by Mr. Hill and his associates since establishment of this unit has been the tendency among residents of all sections of the city to bring their appliance problems to the branch.

This has been particularly true among the salaried group, Mr. Hill says, many of whom are contemplating home building with FHA financing, or have already purchased such homes. The interest shown by these people has been not confined to such equipment as refrigerators, washers, etc., but to air-conditioning facilities suited for small home use.

In making the location survey, the management made use of its city sales staff and its service department. Special emphasis was placed on the part played by the latter, since it was in frequent and close contact with users.

The inquiry revealed, Mr. Hill says, that immediate proximity of a branch was a second consideration to degree of easy access. Service patrons, in particular, were more interested in the ability of service operators to reach them with ease.

"Our choice of location places the store within easy reach by trolley and bus, or both, no less than by motor car," Mr. Hill says. "The gain in service calls following our setting up of the branch was 7% in the first month. The sale of parts has grown more considerably. Service department been placed on a 24-hour basis.

"Another development has been that many people—young couples in the greater number—who are salaried, have little time during the day, and who are interested in picking Christmas presents for friends, come here at night and discuss these things with us."

The move has had the additional advantages of greater storage space for stock, better facilities for live display, and a much lower rental cost.

$1,000 Awards In Christmas Campaign

MILWAUKEE—Wisconsin Electric Power Co. is sponsoring a pre-Christmas appliance promotional campaign, chief features of which are a five-days-a-week radio program and a $1,000 prize contest.

The radio program, inaugurated Oct. 2, is heard from Monday through Friday, 9:45 to 10 a.m., over station WISN, and features Ida Bailey Allen, household adviser. Prize contest, to be started later, offers $1,000 in electrical merchandise certificates to spur the giving of appliances as Christmas gifts.

Milwaukee appliance dealers are cooperating in the holiday appliance gift campaign.

14 REASONS WHY You Can Depend on DETROIT EXPANSION VALVES

There are 14 separate tests to exhaust every possibility of a faulty Detroit Expansion valve going into service.

Five of these tests involve the power element, two the body and bellows, two more for the needle and seat, one for the connections and the final four for the assembly as a whole. As manufacturing operations have improved, allowable tolerances in these tests have been steadily reduced until now these tolerances are less than the casual observer might think necessary.

But the exceptional service records of Detroit Valves are conclusive proof that these valves are thoroughly dependable and that the rigid testing program is more than justified. Install Detroit Valves and minimize servicing.

DETROIT LUBRICATOR COMPANY

General Offices: DETROIT, MICHIGAN

Canadian Representatives: Railway & Engineering Specialties Ltd., Montreal, Toronto, Winnipeg

TAKE ADVANTAGE OF YOUR JOBBER'S COOPERATION

Distributor-Dealer Doings

Refrigerator Selling Is Studied As Test Case of N.Y. Price Control Law

NEW YORK CITY—A study of the application of New York State's Feld-Crawford price control law to the merchandising of refrigerators and other electrical appliances will be launched shortly by the American Fair Trade Council, reports W. H. Crichton Clarke, president of that body.

The electric refrigerator was chosen as the object of this study, Mr. Clarke pointed out, because of its commanding prominence in the major appliance field, because retail prices of most major brands have been established under the Feld-Crawford law, and because, as one of the most important and popular commodities in the retail field, it should serve as a fair index of the influence of the application of fair trade laws generally.

Reports indicate, he said, that in at least some instances price control of refrigerators has not been satisfactory.

Mr. Clarke pointed out that the council is a non-profit membership organization supported by firms and individuals interested in protecting the right of fair trade practice, and that its sole purpose in any such investigation was to ascertain the facts of the case and to further, whenever possible, the fundamental principle of fair trade.

Elect 5 To Cleveland Appliance Board

CLEVELAND—Five new members were elected to the board of directors of the Cleveland Appliance Association at its annual meeting at the Mid-Day Club. These new members, and the stores they represent, are:

William Berndsen, Good Housekeeping Shop; William London, London Furniture Co.; Paul C. Nyland, Geo. C. Land Co.; Frank Smerda, Smerda's Music House, Inc.; Karl Linn, Linn Radio Co.

'Homewares' Store Opens With Appliances Featured

WASHINGTON, D. C.—The MacMannes Homewares Store has opened at 1332 G. St., N.W., as a Hotpoint dealer. Appliances are a leading department of this new-type store which deals exclusively in home wares—kitchenware, gadgets, electric kitchens, radios, and small appliances.

French Chef Adds Foreign Flavor To Cooking School

SUPERIOR, Wis. — The Superior Theater's second home economics party was held recently with Rene Alexous Boursier, nationally known French chef, as guest instructor. Prizes awarded included a G-E refrigerator from Benson Electric Co., and a Moore gas range from Rudolph's Furniture Co.

Palmer Made G-E Manager At New Haven Office

NEW HAVEN, Conn.—C. E. H. Palmer of the Newark, N. J., office of the General Electric Co. has been appointed manager of the company's New Haven office. The appointment became effective Oct. 1.

Gerard Goes To Baltimore

BALTIMORE — "Jerry" Gerard, formerly with the Washington branch of Simon Distributing Corp., Hotpoint distributor, has been named manager of the company's Baltimore branch. He succeeds Leo K. Snyder, who has joined the Baltimore staff of Nelson & Co., Philco Conservador distributor.

31 Chattanooga Dealers Form Appliance Assn.

CHATTANOOGA, Tenn. — Thirty-one electrical appliance merchants of this city met recently to form the Chattanooga Electrical Appliance Dealers' Association. A seven-man board of directors was named, and this board was delegated to select officers for the association at the organization's next meeting.

Principal topic of discussion at the first meeting was the Chattanooga Electric Power Board's non-merchandising policy of encouraging additional use of electric current by aiding dealers in their appliance sales efforts.

Members of the board of directors are: C. H. Clemons, Clemons Bros.; John O. Fowler, Sr., Fowler Bros.; Herbert Ray, Rhodes Jones Furniture Co.; Hal Hersheimer, Sears, Roebuck & Co.; Herbert Hailey, W. C. Teas Co.; Sidney Marks, Tennessee Valley Electric Co.; Chester Varnell, Chattanooga Hardware Co.

Va. Appliance Sales Show Big Gain

ALEXANDRIA, Va.—With electric refrigeration leading the way with 472 units, sales of major appliances in the territory of Virginia Public Service Co. in September continued to lead comparable 1938 totals by a wide margin, totaling 952 units as compared to 799 in the same month last year.

Household refrigerators led all appliances during the month, with 440 dealer sales reported. Commercial refrigeration equipment accounted for another 32 units. This compares with a total of 413 household and commercial units in the month last year.

Electric range sales during September totaled 114 units, as against 80 in the month in 1938, and water heater sales were 25 units this year, compared with 23 last year. Sales of miscellaneous appliances were 341 units this year, against 283 in 1938.

Practically all of this latter total was comprised of washer sales, which totaled 327 units, with ironer sales adding another eight units and water systems six.

A comparison of 1938 and 1939 major appliance sales through September in the territory follows:

	1939	1938
Refrigerators	7,603	5,926
Ranges	893	768
Water Heaters	351	291
Miscellaneous	3,096	1,790
Totals	11,943	8,775

Traveling Mart Displays Appliances To Dealers

JACKSON, Miss. — A "Traveling Merchandise Mart" participated in by 23 manufacturers, distributors, and jobbers of electrical appliances, was a feature of the fall dealer campaign inaugurated recently by Mississippi Power & Light Co.

An accumulation of electrical appliances such as a person would have to visit distributor showrooms in several cities to see was carried on a round of the state and shown to dealers at meetings in Vicksburg, Greenville, Clarksdale, Grenada, McComb, Natchez, and Jackson. In each city, one hour each afternoon was set apart for the public to see the merchandise display.

At a state-wide dealer meeting held in connection with the show in Jackson, L. M. Taylor, sales promotion and advertising manager of the utility, explained details of the "NO Means DO" campaign which ends Dec. 23. The "NO" in the slogan means "Natural Opportunity," and the "DO" is pronounced as in "DO-Re-Me," which, translated, means "folding money."

Part of the "NO Means DO" campaign is a state-wide Electric Range Exposition, in which trade-ins will be widely featured for the first time.

The Corner Saloon Becomes an Appliance Salon When Colorado Dealer Modernizes Building

PUEBLO, Colo.—Modernizing a pool room and a beer parlor into a "show store" for electrical appliances, R. B. Kyle of R. B. Kyle Electric Co. here has transformed an old two-story building into an attractive setting for sales.

Mr. Kyle bought the run-down building and made the first floor into a single large room, with center staircase leading to the second floor. Two large display windows occupy the front of the store. Interior color scheme includes ivory walls and ivory linoleum, trimmed in red and blue. Fluorescent lighting units provide illumination.

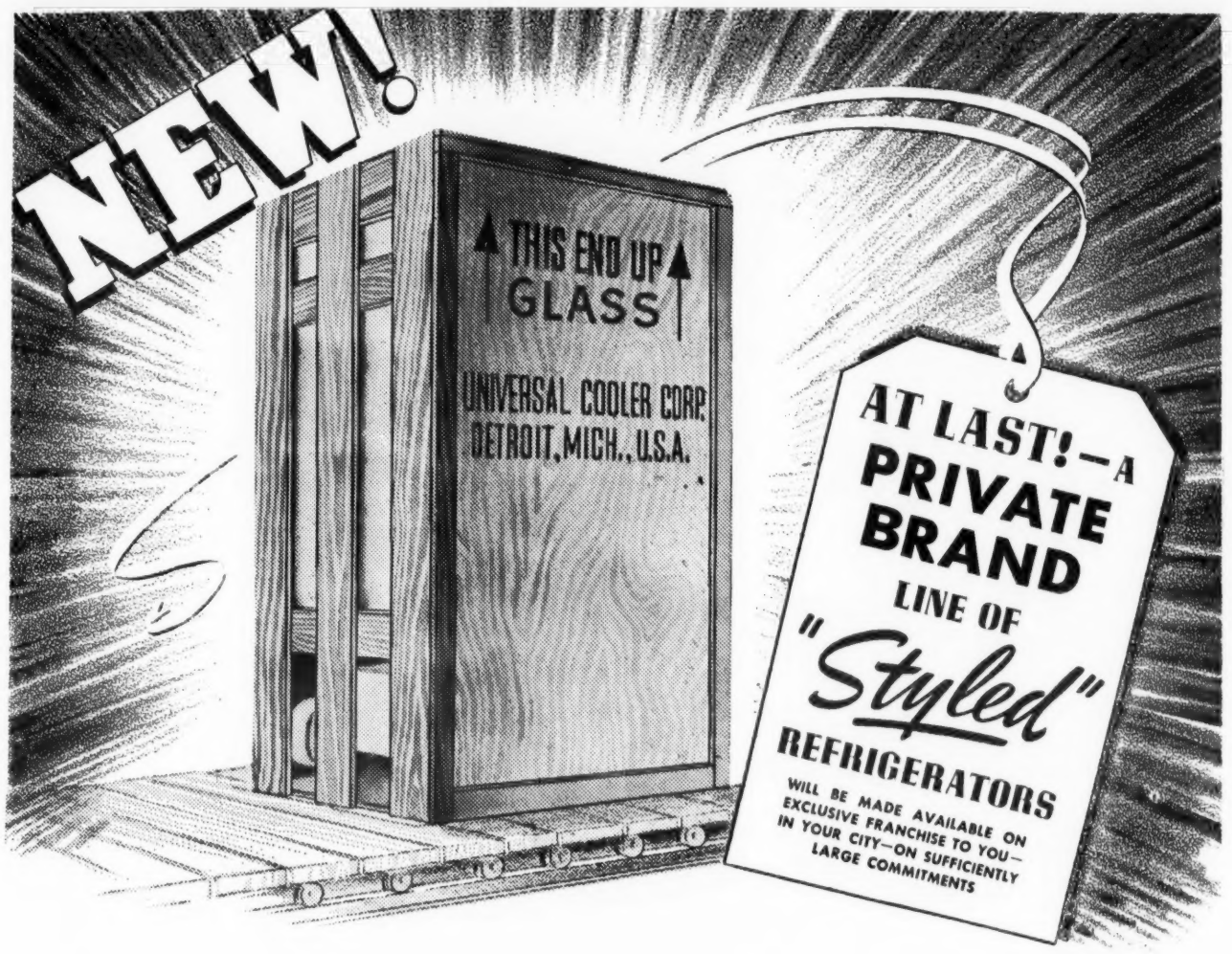
Display of Frigidaire electric refrigerators extends down one side of the store, and "spot" refrigerator displays are along the other wall and on the second floor. The radio department is on the second floor.

In addition to Mr. Kyle, who has been in the electrical business in Pueblo for 36 years, his two sons, William G. and Robert L., are active in the business. Completing this family personnel is Mrs. Kyle, who is office manager.

Wonders of Appliances Shown At Town Fair

BARLOW, Ohio—A display and demonstration of electrical appliances and equipment sponsored by Monongahela West Penn Public Service Co. was one of the features of sixty-eighth annual Barlow Fair held here recently.

C. B. Lytle, C. B. Rexroad, D. F. Willson, and G. M. Schuff were in charge of the utility's exhibit at the fair. Other Monongahela representatives attending the fair included Warren E. Burns, Austine Slater, Sam B. Brittigan, and C. B. Waggoner.


NEW!
THIS END UP
GLASS
UNIVERSAL COOLER CORP.
DETROIT, MICH., U.S.A.
AT LAST!—A PRIVATE BRAND LINE OF "Styled" REFRIGERATORS
WILL BE MADE AVAILABLE ON EXCLUSIVE FRANCHISE TO YOU—IN YOUR CITY—ON SUFFICIENTLY LARGE COMMITMENTS

If You Act Now~

Exclusive Franchise on America's Greatest Line of **ELECTRIC REFRIGERATORS**

To Be Sold Under *Your* BRAND NAME

It's happened! Universal Cooler Corp. has created a line of Electric Refrigerators . . . exclusively for you . . . your volume . . . your *PROFITS!* Never has such styling been built into a refrigerator! Never has such attention been paid to detail to make a line perfect in every way . . . dazzlingly beautiful . . . full of eye appeal and sales appeal!

Styled
by One of America's Outstanding Automobile Designers

Truly a crowning achievement in styling . . . which, to produce, involves, to our knowledge, the largest investment ever made for dies by a manufacturer of private brand refrigerators.

And . . . never has a private brand refrigerator been so ready to compete. Name any important new feature and *your brand* has it . . . for LESS MONEY . . . at FULL MARK-UP FOR YOU! Tie up with Universal Cooler Corp. on these new 1940 Refrigerators to be sold under your own private brand name . . . and you not only get a BIGGER PROFIT LINE . . . A FASTER SELLING LINE . . . A GOOD-WILL BUILDING LINE . . . but you are protected in your trading area by a fair-dealing distribution policy. Don't let anyone beat you to the punch. Act now! Get the full details! Let's arrange a private advance showing at our Detroit headquarters.

UNIVERSAL COOLER CORP.

Automatic Refrigeration Exclusively Since 1922

DETROIT MICHIGAN

Canadian Factory Brantford, Ontario

Manufacturers' Agents' Place In Refrigeration Parts Distribution

Right Man Is Generally One Who Can Combine Engineering & Selling, & Who Handles Related Lines

TURKEY RUN STATE PARK, Ind.—Manufacturers' agents can help manufacturers to introduce new products and to provide continuous representation in a given territory, but only in a few cases do they provide the complete answer to the distribution problem, declared C. V. Gary, sales manager of Henry Valve Co., in speaking on "Selling Through a Manufacturers' Agent Setup—Requisites and Limitations Thereof," before the recent meeting here of the Refrigeration Equipment Manufacturers Association.

Mr. Gary described the advantages of using manufacturer's agents, outlined methods of obtaining good agents, suggested some factors to be considered in selecting the agents, and finally told of some of the disadvantages in a manufacturers' agent setup, and how they might be avoided.

Definition of a Manufacturers' Agent

A manufacturers' agent, said Mr. Gary, should not be confused with a selling agent or a broker. A manufacturers' agent is an individual or firm selling part of the output of certain producers with whom continuous relations are maintained.

These agents usually cover a more or less limited territory in which they have exclusive rights for the products they represent. Most of them work on a commission basis and have little to say regarding prices or terms of sale, since these are dictated by the manufacturer.

Manufacturers' agents, according to Mr. Gary, may be divided into two general classifications: (1) Non-stocking, and, (2) Stocking. The stocking agent may either have a stock on consignment from the manufacturer or one which has been purchased outright.

The Need for a Manufacturers' Agent

The need for a manufacturers' agent arises when the manufacturer for various reasons does not want to go to the expense of organizing and maintaining his own sales force operating from the factory or branch offices, Mr. Gary explained.

Among the conditions governing the need for this type of agent as a selling medium are the following:

1. A small line of products, serving a limited market.
2. Customers or prospects located at a relatively great distance from the home office or factory or each other.
3. The product or the manufacturer are relatively unknown.
4. When a new field is sought for a certain product of an established manufacturer.
5. A producer wishes to introduce his line to a certain group of prospective customers with whom he has previously not been in contact.
6. Need of a specialist to promote the sale of a certain product.
7. Where continuous representation in a certain market or territory is necessary and calls cannot be made frequently enough by men from the factory.

Some manufacturers use a number of different methods for locating agents, among which Mr. Gary lists the following:

1. Send a man from the factory into the territory in question to inquire of the trade regarding established agents who may be contacted. Information acquired by personal contact in this way is generally more dependable than can be obtained by any other method.
2. Ask the men now handling your products to suggest names of suitable agents for other territories.
3. Asking manufacturers of other allied non-competitive products to suggest qualified men. Some manufacturers welcome within reason a chance of aiding their agent to take on additional lines to increase his income and provide better coverage for all concerned.
4. Write the most important buyers of your products, since they are generally in position to know who are the best equipped and best liked manufacturers' agents.
5. Attend conventions and shows of national and local trade organizations where the most desirable agents can generally be contacted.
6. Investigate inquiries from the agent. Alert, active agents are constantly on the watch for promising lines.
7. Answer advertisements of agents seeking lines. Some good agents do a limited amount of advertising and then take their pick from available lines.
8. Use lists compiled by trade journals. These can be valuable if they are really up-to-date and show the territory covered, the lines handled, and the number of additional salesmen employed.
9. Use the services of one of the marketing counselors or other organizations specializing in bringing agents and manufacturers together. This channel can sometimes be very valuable as better organizations of this type only suggest as agents those about whom they have fairly complete information.
10. Advertise in the trade journals. Sometimes this method brings good results. Blind advertisements should never be used since good agents will not answer this type of an advertisement any more than they would pay attention to unsigned letters because of their hesitancy in jeopardizing a connection in case the advertisement has been inserted by a manufacturer the agent is already representing.
11. Another possible channel is the chamber of commerce. Some of these organizations do their best to maintain an up-to-date list of local manufacturers' agents who are anxious to take on new lines.

Factors To Consider In Selecting A Manufacturers' Agent

"In selecting a manufacturers' agent many different factors must be considered," declared Mr. Gary. "These vary according to the product, the trade channels through which it passes, and the territory involved."

Mr. Gary listed the following as some of the factors:

"1. Some lines require a manufacturer's agent who is not only a qualified salesman but who also has had a considerable amount of engineering experience. Other lines, for proper development, may depend more on the man's ability as a salesman than on his engineering background.

"In our own refrigeration and air-conditioning industries an engineering background is desirable in most instances. We must not lose sight of the fact, however, that really the first factor for consideration in selecting the agent is his record as a salesman. The average manufacturer does not have the time nor the money necessary for experimenting with an individual who has turned from some other trade to that of salesman.

"2. Another very important factor is the agent's ability to finance himself. Even if the man is an excellent salesman, fully qualified in every way, he may still be almost worthless to the manufacturer if he has limited funds for covering the territory.

"3. In granting a certain territory to a manufacturer's agent the actual market represented is not as important as frequency of coverage. Most manufacturers' agents have a habit of asking for more territory than they can or will effectively cover. Very few ever ask for less territory than they can easily work.

"In choosing agents some manufacturers pick the territory and then hunt for the individual or firm. Others select first the individual or firm and then allot the territory.

"4. The applicant's reputation in his territory must be carefully considered. Is he in good standing with the buyers? Do they like him and have they confidence in his statements about the products he has to sell?

"5. Then you come to the factor of the kind of trade your applicant calls on. Does he know and call on the buyers who purchase your type of products? If you want orders you cannot afford to wait while a salesman is cultivating a group of buyers which is new to him.

"6. Naturally, it is of the utmost importance that the agent is not now selling and will not sell any competitive products. It is often desirable that he is selling other lines closely allied to yours.

"7. Furthermore, it is always desirable that the agent's other lines are produced by manufacturers who follow more or less the same general marketing policy that you do. For example: If an agent in handling one line gets into trouble with his customers or prospects because of the policy of one manufacturer then it is obvious that his other lines are quite apt to suffer.

"8. One must consider also the length of time that your prospective agent has represented his present list of manufacturers. The sales of some very fine lines have been seriously hindered if not killed by too many changes in representatives. If your applicant has the reputation of changing lines frequently, beware of him.

"9. Another factor to bear in mind is that of references. Ask for and get them by all means.

"10. The applicant's manner in conversation must be judged carefully. If for one reason or another he does not make a favorable impression on you in the course of an interview the chances are the majority of the customers and prospects will have the same reaction as you do. Since most of us depend primarily on repeat business we cannot afford to use high pressure selling in our setup.

"11. One must also bear in mind the length of time the prospective agent has been operating as such

(*Concluded on Page 15, Column 1*)

Attacking the Distribution Problem Scientifically

If there is such a thing as a scientific approach to the selection of men to handle a manufacturer's distribution problem, Mr. Gary has given the formula for it here in his talk on "Selling Through a Manufacturers' Agent Setup."

The talk and subsequent discussion reported here outlines the factors to be observed in the successful hiring and direction of agents to handle the manufacturer's line.

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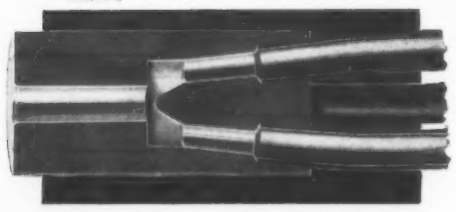

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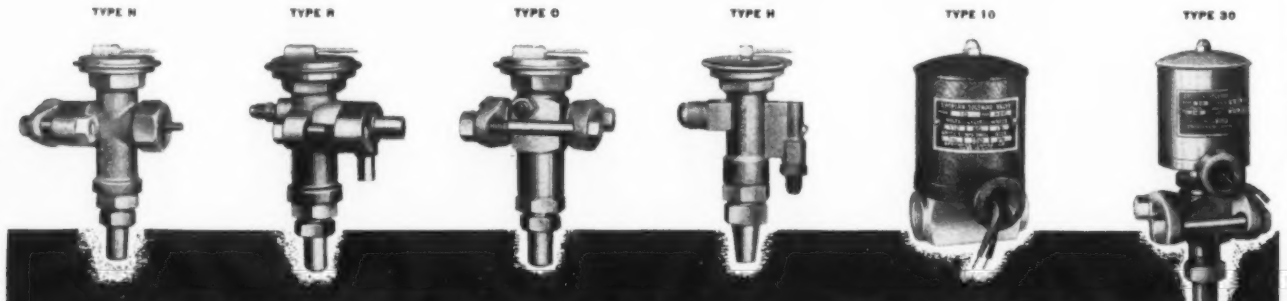

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Management Must Control Policies of Manufacturers' Agents, Gary Says

(*Concluded from Page 14, Column 5*)

and what his average earnings have been over a period of years.

"12. Other factors to be considered in selecting an agent are: Personal appearance, habits, his home life, friends, associates, etc. If he is married, how does his wife feel about the length of time he is away on trips and the number of hours of overtime that he has to put in on his job."

Sales Agreement Between Factory and the Agent

The agent must, of course, truly represent the manufacturer's policy in all dealings with customers or prospects so that the purchaser may have full confidence, it was pointed out by the speaker. In order to expect the best performance by the agent in the field the factory on its part must extend maximum possible cooperation.

The sales agreement entered into by the manufacturer and the agent usually stipulates duration of contract, territory to be covered, the classifications of purchasers to be solicited, the frequency of calls, prices, and terms of sale, terms for returns and allowances, and the amount of commission to be paid.

The rate of commission paid by the manufacturer to the agent varies considerably with the nature and unit value of the product. It ranges from 2½% to 25% and even higher in the cases of certain specialty items.

Other factors influencing the rate of commission are: Degrees of competition, extent of sales effort required, fertility of the trade territory to be covered, class of customers to be developed, amount of repeat business and other functions performed by the agent, such as warehousing, credit, repair, and collection services.

Some factories on certain lines pay commission only on orders originating from the agent's territory. Others split compensation on an equitable basis between the agent in whose territory the order originated and the one into whose territory the product is shipped.

Factory reports on business volume obtained in the territory should be sent to the agent periodically.

The agent should receive copies of orders, invoices, be kept informed of shipping dates, and credit standing of actual and potential customers.

Established prices, functional classifications, terms, and other details must be strictly adhered to by the agent and rigidly enforced by factory control.

Checking Performance Of the Agent

"There are a number of ways of checking and controlling the agent," Mr. Gary stated.

"1. Frequent reports by the agent to the manufacturer. These need not necessarily be held to a definite schedule but must be sent in immediately when dealing with the most important customers or prospects. Routine calls can be reported periodically. Where time permits, it is preferable that some notation should be made of every call. The manufacturer could, naturally, glean much information of value from the agent's report in regard to the performance of the latter in the field. The tone of the report can be of considerable value, denoting whether the agent is optimistic or pessimistic, practical or visionary, thorough or careless, interested or lackadaisical.

"2. Orders sent in. Orders may be forwarded to the factory, either by the agent or direct from the customer.

"3. Acknowledgment of correspondence from the factory, customer, or prospect.

"4. The agent's attitude towards his work can also be determined from ideas for new products or for improvement of present products that he may send in from time to time.

"5. Among other checks on the performance of the agents are: Comments from customers or prospects, whether in the form of letters to the agent or factory or in the course of personal contact by the sales manager or other individuals responsible for directing the work of the agent.

"6. Comments from competitors, or other individuals such as trade paper representatives, etc., all help in giving the factory an idea as to how the agent is working his territory.

"7. Another and most important method of checking is factory analysis of volume of business produced in the agent's territory compared with preceding periods, percentage of actual business compared to estimated potential business as to number of accounts and as to volume obtainable from each account.

Advantages of Using Manufacturers' Agents

"In a book entitled 'Industrial Marketing' by John H. Frederick, the author gives an excellent summary of the advantages and disadvantages of using manufacturers' agents, which are quoted herein:

" '1. The use of manufacturers' agents eliminates branch office expenses, and he creates no overhead to be absorbed by the manufacturer when he is not doing any business.

" '2. The manufacturers' agent is an independent business man, and it is to his advantage to stimulate the sales for his principals' products; otherwise his own income suffers.

" '3. The manufacturers' agent is in a position to keep in regular contact with buyers in his territory, since he has a number of lines of products to sell. Moreover, he can use a lead developed by one of the manufacturers whom he represents, to obtain orders for his other products.

" '4. The manufacturers' agent is frequently able to quote on, and sell, combined contracts covering a wide range of products, thus possibly including a certain product that might otherwise have little chance of adoption.

" '5. The manufacturers' agent can more easily build up acquaintanceships in the field than can a salesman who must cover a larger territory and who must specialize in one line.

" '6. When the product or the manufacturer are relatively unknown or when a new field is sought for a certain product of an established manufacturer the manufacturers' agent, assuming that he is well known in his territory can lend his prestige in developing sales.' "

Disadvantages of using manufacturers' agents, as listed by the author, are:

" '1. The use of manufacturers' agents may make it unnecessary for a manufacturer to maintain branch offices and pay salesmen's salaries, but, at the same time, unless the commission paid the agents is sufficiently high for them to make a good profit over and above their expenses of doing business, they are not interested in the account. Since the agent pays his own traveling expenses, he is hesitant about taking a long trip to see a prospect unless he is reasonably sure of securing an order. As a result, many good leads are not followed properly, and business is lost.

" '2. In many cases the manufacturers' agent is too independent to suit the manufacturer. He must be asked to do things; he cannot be ordered as can a salaried salesman. Moreover, the agent is likely to take advantage of his independence by following the path of least resistance and working hardest on those accounts which offer the easiest, most profitable, and immediate sales.

" '3. A manufacturers' agent frequently attempts to carry too wide a range of products. The more products he represents the more difficult it is for him to concentrate on any one of them. He may call on a prospect for one product and find the buyer more anxious to talk about another.

" '4. As has been mentioned in the discussion of the advantages arising from the use of manufacturers' agents, these middlemen are often able to quote on, and sell, combined contracts covering a wide range of products, thus possibly including a certain product that might otherwise have little chance of adoption.

" 'A disadvantage of this practice is that if the agent loses the contract because of such tactics or for some other reason, all the manufacturers whose products were included suffer. In addition, if the prospect decides to divide his business arbitrarily among several bidders, the agent must take what he is offered, without much opportunity of securing the rest of the business. In such cases, certain of the manufacturers whom he represents lose business which their own sales force may have been able to obtain.' "

Discussion of Gary's Talk Points To Need For Close Attention To Agent's Activities

In the discussion that followed Mr. Gary's talk several of those in attendance added much additional information on the use of manufacturers' agents in a distribution setup, and set forth some considerations in the hiring and use of such men.

'The question is primarily one of cost," declared D. H. Daskal of Perfection Refrigeration Parts Co. "If the manufacturer feels that the possibilities in a territory are such that a direct representative cannot be afforded, then a manufacturers' agent should be selected to do the task."

W. A. Leonard of Imperial Brass Mfg. Co. warned against permitting the manufacturers' agent taking over the functions of a jobber.

"There is one type of agent," declared Mr. Leonard, "who gets a metropolitan territory, and then asks for a warehouse stock. If he gets it for one line, others follow, and before you know it he is selling direct to the trade. But isn't the jobber supposed to do the warehousing job, and isn't he worth protecting?"

G. E. Graff of Ranco pointed out that he considered it the best policy to make connections only with those manufacturers' agents who handle other lines that are such that their sales policies are in line. This avoids confusion, and a tendency to get into bad trade practices, Mr. Graff said.

In metropolitan areas a direct representative may prove more satisfactory than the manufacturers' agent, said Fred L. Riggin, Jr. of Mueller Brass Co., for the reason that the direct representative will tend to cover more small accounts, and to cover all accounts more thoroughly. Contrariwise, in scattered territories outside of metropolitan areas, the manufacturers' agent may cover the smaller accounts better, for the reason that he has a number of things to sell them, while the representative might be inclined to work only the larger accounts.

"Keep the manufacturers' agent's territory within reason," said W. D. Keefe of Fedders Mfg. Co. "The agent will try to take as much territory as he can get out of the manufacturer, and it's up to the home office executives to see that each agent doesn't get more than he can handle profitably for the company."

Following this line of thought, W. C. Allen of Modern Equipment Corp. suggested that often the manufacturers' agent proves a better salesman than the salesmanager of the company whose line he handles, if judged by the concessions that the agent gets.

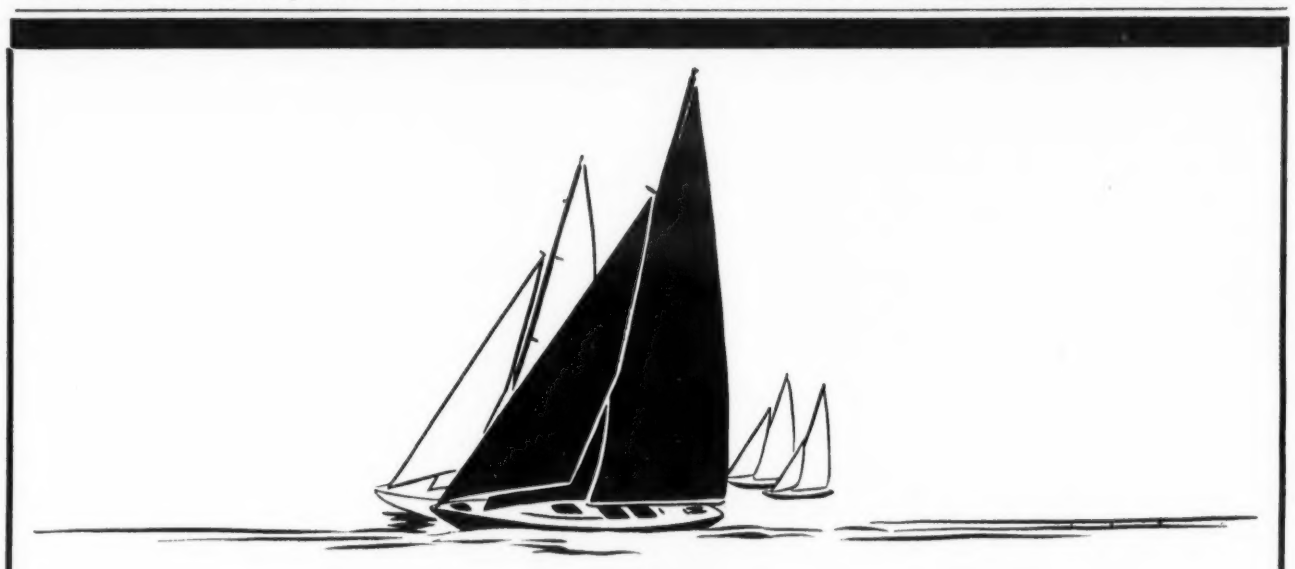
Pointing out that the success of the manufacturers' agent will depend more on the **management** of the company than the agent himself, Mr. Allen suggested three main factors to be kept in mind in working with agents:

1. Control the size of the territory and the type of accounts on which the agent will call.
2. Don't give your line to an agent carrying too many other lines.
3. Control sales policies, who can be quoted prices, etc.

Speaking from the standpoint of a refrigeration jobber upon whom manufacturers' agents call, Joe Oberc of J. M. Oberc, Inc., Detroit jobbing firm, asked that manufacturers' agents be appointed who can bring the jobber some valuable information and product data.

According to Mr. Oberc, there is no middle ground for agents; either the man is one whom the jobber is pleased to see coming, or one who evinces an "Oh, oh, here comes that man again" from the jobber when he enters the door of the jobbing establishment.

"We on the firing line," said Mr. Oberc, "need engineering features, specifications, and data to make comparisons, so that we can really sell a man on a particular item, rather than just taking his order. And the manufacturers' agent should be able to supply that information."



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Air Conditioning Begins To Untangle

STUDENTS of economic history began to look around for a "Moses" industry back in 1932. They observed that the nation had righted itself from previous depressions either by the discovery of new gold fields or by the rise of a new industry. Railroads had been the "Moses" which led the country out of one major depression; automobiles had ended another, and radios had been useful in that connection so recently as 1922.

Now, declared the economists, all this country needs is a new industry to create new wants, bring money out of hiding, and create employment. They cast around for such a new industry, and lighted upon air conditioning with glad hosannahs. This, they announced to a prayerful world, should be the means of checking the downward spiral of employment and national income.

Great Expectations Fail To Materialize

Years passed, and nothing much happened. Air conditioning increased in uses, to be sure, but it didn't become a major industry. It scarcely stirred a ripple on the surface of our economic sea. And the economists and commentators, dismissing it with the same broad ignorance of its nature and problems that led them to espouse it in the first place, said: "air conditioning is a flop."

Anyone who is fairly well acquainted with the air-conditioning industry knows that it isn't a "flop." As a matter of fact, it has had steady—even if unspectacular — progress, particularly from an engineering point of view.

Loose Ends To Tangle Have Been Located

True, almost nobody has made any money in the business, and its distribution is tangled up in what sometimes appears to be an almost hopeless maze. But the reasons for this tangle are beginning to become known, and now that the industry has located these "loose ends," it would seem that the tangle can eventually become unravelled.

When the economists confidently predicted that air conditioning would become the depression-busting industry, they were thinking in terms of the days when our government did not treat the entrepeneur, "the rugged individualist," as a particularly vicious type of criminal who must not only be tied down, but stamped upon. The great railroad, automobile, and radio industries were not built by government-inspired cooperative action. They were built by swashbuckling, hell-bent-for-leather promoters who gambled with Destiny for high stakes and gave an accounting to nobody.

Rugged Pioneers Held In Check By New Dealers

Our more "enlightened" critics of today have a name for these pioneers. They were "the robber barons." A slight stench is supposed to affront our nostrils every time we think of them. But just as it takes uncouth, brawling tough guys to open up a new gold field, so it takes "rugged individualists" who are willing to gamble all-or-nothing on the success or failure of an idea to pioneer a new industry.

By means of administrative fetters and public scorn the New Dealers have kept such men practically under lock and key. They've never had a chance to push air conditioning. And that's one reason it has not become the hoped-for "Moses" industry.

Cast-Iron Crowd Try To Build Fence Around Business

Another reason for its failure to attain a depression-smashing momentum has been the existence of "vested interests" (to borrow a term from an earlier muckraking day) which saw it as a possible threat to their business. These "vested interests" can be labelled roughly as the "cast-iron people."

These were the makers of furnaces and radiators. They had tremendous investments to protect. They also saw a chance to cash in on the public's quick approval of the *idea* of air conditioning. So they invented the term *"winter* air conditioning."

'You Don't Need Cooling,' They Tell Prospects

In a very short time there wasn't a *furnace* manufacturer in the country. They were all "air-conditioning" manufacturers, by virtue of the addition of a fan, a filter, and a pan of water.

"You don't need cooling," was their cry. "It's humidification that's important. Cooling is necessary only a few weeks out of the year—and if you do want it, you can always add a compressor later."

Air Conditioning Manufacturers Go Into Heating Business

Not to be outdone, the real air conditioning manufacturers went into the heating business. For a time they became all absorbed in making oil burners and gas furnaces, boilers, and whatnot. And, a bit "taken in" by the propaganda of the cast-iron crowd, they began to act on the erroneous assumption that only a heating and piping contractor could be trusted to learn how to install air conditioning.

Too Many Firms After Too Few Prospects

The result was to throw both the air-conditioning business and the heating business into more of a jumble than ever. There were far too many manufacturers and far too many installers for anyone to pay for letterheads and postage. The wastage of twenty different firms making twenty different estimates on the job (usually varying all over the map, thus confusing and antagonizing the prospect) has been keeping the industry poor and prices high.

Labor Unions Seek To Get Industry Under Control

A third millstone around the neck of the struggling young air-conditioning industry has been the politically entrenched building-trades labor unions. Like so many others, they saw air conditioning as a "coming thing," and set out, long in advance of its "arrival," to get it under control.

By means of codes and ordinances they arranged it in many cities—Chicago is a flagrant example—so that only their men (paid at outrageous rates) could install air conditioning, and that they had to install it in their own way. This has not only added staggeringly to the costs of air conditioning, but has stymied its engineering progress.

Jurisdictional Disputes Add To the Confusion

And to contribute still more headaches to the beleaguered air-conditioning business, jurisdictional disputes between steamfitters, plumbers, and sheet metal workers have held up installations and raised costs still more.

Summed up, too many factors were seeking to get air conditioning *under control.* They got it under control all right. They practically throttled it!

In the meantime, the public's interest began to flag. High prices soon convinced most people that air conditioning was strictly a luxury item. Lack of standards, conflicting ideas on engineering principles, and excess-capacity installations which chattered the teeth of all who passed through the clammy atmosphere they created all combined to cause the public to lose confidence.

Pretty bleak picture? Possibly. But to coin a phrase, there are rays of hope behind the dark clouds. All may be confusion, but all is not lost. Included in the industry are quite a few specialty minded dealers who think they see ways and means of untying the Gordian knot.

High Class Specialty Dealers See Way Out of Dilemma

These dealers are high class and high powered. They have pioneered specialties before. They were brought into the industry with glowing promises which failed to pan out; but they aren't going to give up easily. They believe that a mutual assistance pact may help them out of their dilemma.

First of all, they want to assist the industry in getting its own house in order. Second, they believe that the public must be educated to the real *need* for air conditioning.

Air Conditioning is Health Protection, Not Luxury

By setting up and adhering to decent standards, and by reducing prices through the short-circuiting of wasteful installation practices, they hope to regain public confidence. Concurrently, they may get across to the public that:

Wherever people meet in an enclosure, wherever people live and work indoors, air conditioning is a vital necessity to good health.

If air conditioning can rid itself of its several millstones, if it can get together on a strong cooperative program of public education, it can still attain the great future that once was predicted for it. Industry thinkers are getting a clearer and clearer picture of what needs to be done. And if they will follow up their thinking with action, air conditioning may realize its vast potentialities.

They'll Do It Every Time . . . By Jimmie Hatlo

FOR THE LAST TIME— WHERE IS THAT TUXEDO? I'M SUPPOSED TO BE MAKING A SPEECH AT A BANQUET RIGHT NOW!
I'M SORRY, SIR. THE VALET IS HAVING A LITTLE TROUBLE WITH THE STEAM.
TELL HIM TO KEEP HIS SHIRT ON. THEY'RE STEAMING OUT THE VALET TO SOBER HIM UP.
PERSONALLY, I'D SAY THIS IS A BREAK FOR THE GUYS AT THE BANQUET.
NO PANTS - NO SPEECH - MAYBE THE COMMITTEE BRIBED THE VALET.
WAITING FOR A SUIT TO COME BACK FROM THE HOTEL SPONGE AND PRESS PALACE - THEY'LL DO IT EVERY TIME
JIMMY HATLO
10-11
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LETTERS

'Dallas Is a Pretty Hot Little Town'

Hardcastle & Forney, Inc
Engineering Service
Easton, Md.
Oct. 27, 1939

Editor:

It is with great interest (and glee) that we read L. J. Van Sickle's letter in the Oct. 25 issue of your paper in regard to the use of window-sill air units in Dallas, Tex.

Aside from the fact that window-sill units are not designed for use in any size room, any where; and that his friends handling the Johnson units must have been ambidextrous and double jointed to be able to get four of them in one window; we would like to point out that Dallas is a pretty hot little town in more ways than one, from all we have heard.

If we were figuring on air conditioning a room in Dallas or an anteroom to Hades for instance, we would use a machine size or two larger than normal and then add on for additional hot air as given off by most Texans.

We see that he went to the G-E air-conditioning school. We had a lot of them at the York school and found them swell guys and are sure that Mr. Van S. is one also, but unfortunately they believe everything they read and take it too seriously. Tell him not to use window-sill units but to stop bragging on how hot Dallas is. Who cares?

MALCOLM L. CLEARY

'Old Timers' To Rally At Reunion In Detroit

E. T. Williams
Consulting Engineer
51 East 42nd St., New York City
Oct. 25, 1939

Dear Mr. Taubeneck:

I wish to thank you for your letter of Oct. 23, extending to me an invitation to meet at an "Old Timers Reunion" at Detroit on the night of Monday, Nov. 20.

I would certainly enjoy being there and shall make every effort to indulge myself to that extent. There is some doubt, however, as to whether I can get away at that time. I shall write you again when I know.

You and that "live wire," Frank Cockrell, are doing a great job and I know the boys will have a grand time with you two as hosts. It will be a major disappointment if I cannot make the grade.

Again thanking you for the kind invitation.

E. T. WILLIAMS

Sunbeam Electric Mfg. Co.
Evansville, Ind.
Oct. 26, 1939

Editor:

Kindly accept my thanks for your invitation to attend the "Old Timers Reunion" on Nov. 20.

I will make every effort to be present in the hope that I may help out in making the evening as interesting as possible.

J. H. DENNEDY

W. A. LEONARD
Imperial Brass Mfg. Co.

EARL A. VALLEE
Automatic Products Co.

J. A. STRACHAN
Kerotest Mfg. Co.

"Cooperation, coordination, and harmony" might well be the "keynote" for the Second All-Industry Exhibition being sounded here by three well-known members of the industry who have been active in the Refrigeration Equipment Manufacturers Association, the organization which is sponsoring the exhibition in January.

The exhibition and the attendant meetings will bring together for the first time all the various elements in the refrigeration and air-conditioning industry.

While it is unlikely that the three men in the cartoon will ever be caught singing "sweet adeline" as a trio, they have worked together to help the Refrigeration Equipment Manufacturers Association set the pace in industry cooperative activity, which is evidenced by the enthusiasm shown for the association's programs, and particularly the Exhibition.

General Coordinating Committee

All-Industry Refrigeration and Air Conditioning Exhibition
Stevens Hotel, Chicago, Illinois, January 15-18, 1940

Representatives

Refrigeration Equipment Manufacturers Association
H. V. Higley, President, Ansul Chemical Co., Marinette, Wis.

American Society of Refrigerating Engineers
Deane Perham, Director, Refrigeration Division, Chicago Master Steam Fitters Association, 228 N. LaSalle St., Chicago, Ill.

The Counter Freezer Association
C. S. Clark, Secretary-Treasurer, 35 East Wacker Drive, Chicago, Ill.

National Air Conditioning Association
John H. Keller, Mechanical Heat & Cold, Inc., 7704 Woodward Ave., Detroit, Mich.

National Refrigeration Supply Jobbers Association
J. M. Oberc, President, J. M. Oberc, Inc., 904 W. Baltimore St., Detroit, Mich.

Refrigeration Division of National Electrical Manufacturers Association
John F. Ditzell, 3740 Lake Shore Drive, Chicago, Ill.

Refrigeration Service Engineers Society
H. T. McDermott, National Secretary, 433 North Waller Ave., Chicago, Ill.

Ex Officio

President of Refrigeration Equipment Manufacturers Association (Rema)
J. S. Forbes, President, Superior Valve & Fittings Co., 500 37th St., Pittsburgh, Pa.

Chairman Rema Exhibition Committee
M. W. Knight, Sales Manager, Peerless of America, Inc., 515 W. 35th St., Chicago, Ill.

Secretary of Committee
R. M. McClure, Secretary, Refrigeration Equipment Manufacturers Association, 111 West Washington St., Chicago, Ill.

Free Named Manager of Scruggs Appliance Dept.

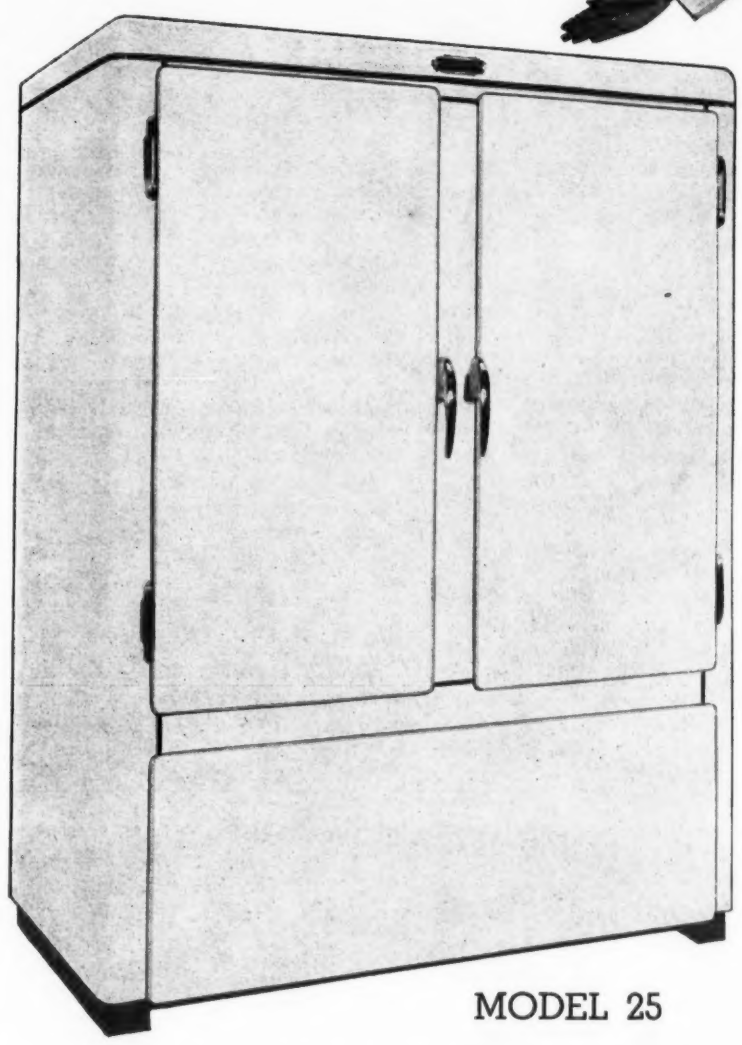
ST. LOUIS—Henry Free, formerly with Interstate Electrical Supply Co., has been appointed manager of the Scruggs-Vandervoort-Barney's fourth-floor appliance and electrical department. He replaces C. W. Amos, who managed both housewares and electrical departments.

Bennett Leaves Celotex For Sprayo-Flake Post

CHICAGO — R. E. Bennett, formerly sales manager of the Thermax department of Celotex Corp., has been appointed vice president in charge of sales of Sprayo-Flake Co., manufacturer of a spray-applied insulating and sound deadening material. He will be located at the company's main office here.

Gloekler PRESENTS A *New* 25 CU. FT.
"Self-Contained" UTILITY MODEL

25 CUBIC FEET OF STORAGE
35 SQUARE FEET OF SHELF AREA



MODEL 25

Low Cost—High Value!

★ All-steel cabinet.
★ Beautiful 3-coat, high-baked Dulux finish; white porcelain floor.
★ Gleaming ultra-modern, chrome-plated, extra-heavy brass hardware.
★ Rod-type shelves, adjustable to ½" variations. Full-height service doors.
★ All inside corners rounded for easy cleaning.

Beautiful ★ Enduring ★ Dependable ★ Economical

Highest cooling capacity—low shrinkage—proper humidity. Available with standard back-wall cooling coil (Model 25) or combination cooling coil and ice cube maker (Model 25-I), with capacity of 18 pounds of ice. Completely assembled, with your favorite condensing unit mounted in the base—all ready to plug into electric outlet. Floor space 49"x28".

ASK FOR COPY OF FOLDER NO. 25

Also a full line of commercial refrigerators and display cases for every need.

GLOEKLER MANUFACTURING CO.
ERIE, PA.

Appliance Firms Change Nema Group Members

NEW YORK CITY — Several changes in their representatives on committees in National Electrical Manufacturers Association have recently been made by companies in the electric refrigeration and appliance field.

C. E. Stephens, vice president of Westinghouse, has been named an executive representative in the Policies Division, taking the place of F. B. Williams, Jr.

C. R. D'Olive, manager of the household appliance division of Stewart-Warner, has been named an executive representative, affiliated with the Refrigeration Section. J. F. Ditzell, formerly an associate representative of the company, has been withdrawn.

D. W. Skinner, managing engineer of appliances of General Electric, has been named an associate representative, taking the place of J. C. Adams in the Domestic Appliance Section, Electric Flat Iron, Electric Food Mixer, and Electric Roaster groups, and also being affiliated with the Appliance Group. C. M. Snyder also has been added to the Appliance Group.

Frank R. Pierce, general sales manager of Kelvinator, has been named an executive representative in the Policies Division. He will take the place of H. W. Burritt in the Electric Range and Electric Water Heating sections, and in the Refrigeration Division, Commercial Refrigeration and Household sections, where he will be alternate voting representative.

Appliance Depts. Combined For Easier Shopping

SHEBOYGAN, Wis. — The H. C. Prange Co. has remodeled its third floor and concentrated all major appliance displays there, including Kelvinator refrigerators, Maytag washers, electric and gas ranges, and Philco radios, so that the homemaker-shopper need not go from one section of the store to the other.

New Hampshire Utility Opens Branch Display

FARMINGTON, N. H. — Twin State Gas & Electric Co. has opened a new Kelvinator electrical appliance display room in the George R. Gray Block here.

The new branch will be under supervision of O. L. Evans, district manager of the Dover division, and Norman Weeks is district sales chief. Associated with them will be W. Lloyd Card, and Ralph H. Card.

Three New Publicity Aides Named At General Electric

SCHENECTADY, N. Y.—Three men have been appointed assistants to C. H. Lang, manager of the General Electric publicity department. W. V. Merrihue was named in charge of the apparatus division, R. L. Gibson in charge of the general publicity division, and B. J. Rowan in charge of the administrative and production division.

Here's why SERVICE MEN *like*

DU PONT *Artic*
REG. U.S. PAT. OFF.

The Preferred METHYL CHLORIDE *for Service Work*

High Purity and Dryness
Dependable Service
Coast-to-Coast Distribution

DU PONT E. I. DU PONT DE NEMOURS & COMPANY (INC.) · The R. & H. Chemicals Department · Wilmington, Delaware
District Offices: Baltimore, Boston, Charlotte, Chicago, Cleveland, Kansas City, Newark, New York, Philadelphia, Pittsburgh, San Francisco

PERSONALITIES

By George F. Taubeneck

Society Column

Charles D'Olive, general manager of the Stewart-Warner appliance department and one of the best-liked figures in the entire refrigeration industry, is a very happy man.

He has a brand new bride, blonde and beautiful. Before she became Mrs. Charles D'Olive, she was Helen Bieker of Cincinnati. She had worked as a secretary in the Crosley refrigeration engineering department, and so she can speak her husband's language.

Also she shares his enthusiasms for good books, hunting, and the great outdoors. They honeymooned in New York, and are now happily ensconced in a Chicago apartment.

* * *

Silver Lining

Chicago was full of conventions last week, as it frequently is. Nema met there at that time. So did the American Society for Metals, the American Institute of Mining and Metallurgical Engineers, the National Metal Congress, and the National Metal Exposition.

Somebody sent us a free "Executives Pass" for the latter group of shindigs, and so, because we were flattered and also hate to turn down anything that's free, we took a look.

War, of course, has the metallurgists all excited. It has boomed the steel industry. It has also set them looking for substitutes for tin, manganese, and tungsten, which America doesn't produce.

One highly interesting result of their search is the discovery that the 70,000 tons of silver the government has buried at West Point may have some practical use. If war cuts off our supply of tin (98% of which comes from the British Malay States), cans for food and beer may be given a silver lining!

* * *

Would Kill Germs

Experiments with silver coatings on rolled steel have proved successful. Tin coatings cost two one-hundredths of a cent per can. Silver coatings cost about a third of a cent.

However, silver coatings have marked advantages over tin, in that they kill germs and preserve the aroma of foods after the can has been opened. Thus housewives wouldn't need to remove food from the cans, as they must now.

It was also pointed out that our enormous stores of gold buried in Kentucky may turn out to have practical value, too. It seems that gold is highly valuable as a refraction agent in the application of paints produced from soy beans and other vegetable products. And other uses are being studied.

So maybe we aren't so badly off, after all.

As for manganese and tungsten (supplies of which are controlled by Great Britain and Russia), the metallurgists are finding that they can be supplanted by lead in making high-speed cutting tools.

There were three acres of exhibits at the exposition.

* * *

Great Day

Two weeks ago this column was devoted to the New York World's Fair, which we visited on General Electric Day.

H. L. Andrews, new manager of G-E's appliance department (about whom this column will tell more next week) wants us to know that General Electric Day was a spectacular success.

Nearly 30,000 G-E employes and their families visited the Fair, making both the largest industrial group to see the Fair from outside the metropolitan area and the biggest meeting ever held of General Electric workers.

Coming from as far as Fort Wayne, Ind., and Erie, Pa., nearly 5,000 of them stayed over for a second day at the Fair.

* * *

Lehman & Smith

Gov. Herbert H. Lehman and former governor Alfred E. Smith, and Mayor Jasper McLevy of Bridgeport, Conn., joined Mr. Swope in welcoming the G-E employes at the New York State Amphitheater, where they were the guests of the company for Billy Rose's Aquacade, for the biggest theater party ever held anywhere.

The mass trip of G-E employes set records everywhere. The 11,000 persons who came from the Bridgeport works made the largest evacuation of the city in its history, and the biggest excursion ever carried by the New York, New Haven & Hartford Railroad. The New York Central Railroad set another record, bringing nearly 10,000 altogether from Schenectady, N. Y., Pittsfield, Mass., and Erie, Pa.

The S.S. New York of Eastern Steamship Lines brought 1,000 in from Lynn, Mass. The Pennsylvania and Long Island railroads also set records with 3,500 passengers from the Philadelphia works, 2,000 from Bloomfield, N. J., and the Bridgeport delegation from Pennsylvania station.

* * *

Special Trains

Eight special trains carried the Bridgeport turnout, all pulled by General Electric locomotives.

Four elephants, loaned by Frank Buck, led a parade of the Bridgeport workers from the Long Island station to the G-E exhibit.

They were followed by a band from the Philadelphia works and the Schenectady delegation with its mascot, "Jove," a docile nanny goat which became the first goat to ride on the I.R.T. subway, the first goat on the Fair grounds, and the first goat to be televised.

After a morning which would have been exciting to anything but a goat, "Jove" spent the afternoon at the Electrified Farm of the Electric Light & Power Companies.

* * *

Personals

William P. Kindt, who worked for General Electric for 40 years and has been retired for 10 years, came from Fort Wayne, for his second trip to the Fair this summer. Before, he had never been to New York in his 82 years.

Walter Mikelson, G-E sound engineer in Schenectady, was the first to arrive, coming down a day early with a sound level meter. Taking a busman's holiday he measured loud and strange noises around the Fair, and found that the biggest noises were made by G-E's 10,000,000-volt bolt of lightning and the whistle on the world's largest locomotive at the Railroads exhibit. Both measured 125 decibels.

"General Electric Day" at the Golden Gate International Exposition in San Francisco was observed on the same day, and Mr. Swope exchanged greetings with Charles E. Wilson, executive vice president of the General Electric Co., who took part in the San Francisco program.

* * *

Gil Baird, a Veteran Producer of Movies

Over in Mansfield, Ohio, there is a feller we have always liked. His name is Gil Baird, and he manages Merchandise Advertising and Sales Promotion for Westinghouse.

Now some of Gil's friends have been pestering us recently. They say we didn't do right by our Gil in the Sept. 6 issue of the NEWS.

In that issue was a lengthy story on the making of industrial motion pictures for refrigeration manufacturers. It concentrated on those produced in Colorado Springs.

* * *

First in Technicolor

Gil's friends have been reminding us that he pioneered the use of Technicolor in minute movies. That goes for anybody's movies—not just the appliance business.

It all started back in 1935, with the first series of six refrigeration "shorts" put out by Westinghouse.

Westinghouse has provided minute movies ever since then, and has used Technicolor exclusively. Mr. Baird produces them all in Hollywood.

This year there are 11 of these available—seven on refrigerators and four on ranges.

The writer watched Mr. Baird produce a black-and-white movie in Detroit 'way back in 1934, and can testify personally as to the Baird skill and technique.

* * *

Chrysler Airtemp Is Producing Units

Curious about the prevalence of rumors that Chrysler was about to abandon the air-conditioning business, your correspondent paid a visit to the Airtemp plant at Dayton, Ohio, a short time ago.

If Chrysler is going out of the air-conditioning business, he is going about it in an odd way, for the huge, sprawling plant (which originally turned out Maxwell motor cars) was humming with activity.

Production was in full swing—"package" units, radial compressors, oil burners were all coming off the line.

Col. Downey, the head man, has made a number of changes in his staff, and avers that now he is really going to town.

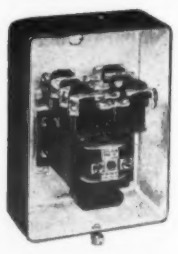
Handicapped by illness for long months, Col. Downey is now in fine fettle. He is a square-built, red-headed man, and looks like a real fighter.

Gil Baird—Pioneer

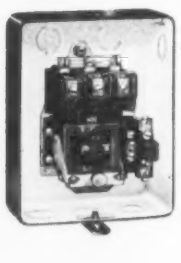
Above is a scene from one of the "minute movies" produced in Hollywood for Westinghouse by Gil Baird, sales promotion manager of the merchandise division. Director Baird pioneered the use of technicolor in industrial motion pictures.

"STARTER TROUBLE? —not with Allen-Bradley Control!"

"No more burned contacts or sticky bearings, and no more unnecessary interruptions due to low voltage. Since we've standardized on Allen-Bradley starters, our customers haven't had a moment's trouble. We put these starters in and forget them! We save on installation and servicing costs and our customers are better satisfied."



For Switching Small Loads
Bulletin 700—A rugged switch for use with stokers, oil burners, and air conditioning equipment. Rated at 25 amperes, non-inductive load. Provided in over 300 types, one to eight poles, with any combination of normally open and normally closed contacts. Has solenoid mechanism.



For Single-Phase Motors
Bulletin 709SP—For self-starting, single-phase motors rated up to 3 hp, 110 v; and 5 hp, 220 v. Operated by push button, thermostats, etc. Simple solenoid construction provides trouble-free operation. Resisto-therm relay protects motor against damaging overloads.

Most starter troubles originate in the switch contacts. The double break, cadmium silver alloy contacts used in Allen-Bradley starters give trouble-free operation and long life. Any oxides that may form do not cause heating, hence the contacts require no filing or cleaning. Also, these starters have no bearings, pins, flexible jumpers, or complicated mechanisms to cause trouble. And, because of their generous wiring space, white interiors, convenient terminals, removable cabinet cover, and many knockouts, they are easy to install.

A Starter for Every Application

Allen-Bradley makes starting switches for every motor and every kind of service in the heating, air conditioning, and refrigeration field. These switches are available in general purpose, water-tight, dust-tight, explosion-proof, or corrosion-proof enclosing cabinets. Write for booklet.

Allen-Bradley Company
1313 S. First St., Milwaukee

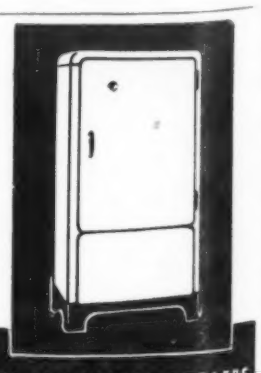
For Polyphase Motors
Bulletin 709—For polyphase motors rated up to 30 hp, 220 v; and 50 hp, 440-550 v. Will interrupt loads of ten times maximum horsepower rating. Furnished with "Start-Stop" push buttons in cover, with plain cover, or with 3-way switch in cover. Thermal overload relays.

For Pressure and Temperature Control
Bulletin 836—Available for controlling pressures up to 300 lb. and vacuums to 30 in., or for controlling temperatures from -50° F. to 500° F. Snap-acting mechanism provides accurate, consistent operation. Not affected by vibration.

ALLEN-BRADLEY
SOLENOID MOTOR CONTROL

Copeland
Priced for Profit!

Copelands make money for you, because they're easy to sell! Your customers recognize Copeland's engineering superiority and record of long service. Low prices, easier terms will clinch your sales. There's a Copeland for every home. Write TODAY for complete information on Copeland's bigger values!



COPELAND REFRIGERATION CORPORATION, Sidney, Ohio
ASK ABOUT COPELAND COMMERCIAL REFRIGERATION AND WATER COOLERS

Major Appliances

Tips on Electric Range Selection Given Farm Wives By REA Publication

WASHINGTON, D. C. — To give the average farm wife some idea of what to look for and what factors to take into consideration when she sets out to buy her first electric range, Rural Electric Administration publishes a list of range recommendations in the current issue of its Rural Electrification News.

Any good standard electric range with three surface units, a well cooker, and an oven will meet the needs for the average farm family, the preface to these recommendations states, even to taking care of additional people during planting and harvesting season. The table-top range is most generally used, the preface points out, and this type of range requires a space about 45 inches wide and 32 inches deep.

Further REA pointers on range selection follow:

One of the three surface units should be of 1,800 to 2,000 watts, the two others from 1,000 to 1,500 watts. Both open and closed type burners give good cooking results, but the enclosed type is easier to clean and has longer life.

Switches should be handily located and easy to grasp, and should have at least three different heats or speeds.

The deep well cooker is a desirable feature for farm use, for it is economical to operate and lends itself to long, slow cooking processes.

Value of such gadgets as time control clocks, condiment sets, lights for top of range and for storage compartments depends upon the individual user. At least one convenience outlet, however, is desirable, and an oven pilot light to show when the current is on adds to the unit's safety.

Oven should be large enough to meet the ordinary needs of the family. Average size is 15 x 16 x 19 inches. It should be well insulated and lined with a rust-resistant material, such as porcelain enamel.

Watch closely for quality. Observe general all-over construction. Ranges should be well built, with joints well rounded and tightly fitted. Finish should be of good quality porcelain, with acid-resisting top.

Select equipment manufactured by established companies whose products bear the stamp of approval of Underwriters' Laboratories, Inc., and have been on the market sufficiently long to be thoroughly tested by users. Buy from manufacturers and dealers who will stand back of service and repair guarantees.

Aug. Household Sales Best In N. Y., Pa., Calif., Ill., Mass. & Tex.

States and Territories	Quantity Household Low Sides August	Cumulative
Alabama	788	15,611
Arizona	227	4,390
Arkansas	384	9,953
California	8,796	98,306
Colorado	539	10,429
Connecticut	1,426*	26,180
Delaware	182	3,158
District of Columbia	1,172	15,051
Florida	2,011	17,984
Georgia	1,757*	22,869
Idaho	333	5,465
Illinois	5,042	127,089
Indiana	2,302	40,379
Iowa	178*	29,807
Kansas	531	15,214
Kentucky	880	22,505
Louisiana	1,775	19,566
Maine	175*	6,782
Maryland	930*	17,985
Massachusetts	3,714	59,076
Michigan	2,615*	73,932
Minnesota	1,407*	42,264
Mississippi	637	9,539
Missouri	1,856	43,778
Montana	40*	4,667
Nebraska	33*	12,653
Nevada	91	1,419
New Hampshire	172	4,473
New Jersey	2,761	60,408
New Mexico	134*	2,681
New York	18,987	200,986
North Carolina	1,080	29,089
North Dakota	117*	3,164
Ohio	3,111	91,141
Oklahoma	568	16,689
Oregon	180*	12,005
Pennsylvania	9,789	148,858
Rhode Island	406	6,836
South Carolina	496*	12,773
South Dakota	135*	4,128
Tennessee	1,575	27,476
Texas	3,706	63,927
Utah	437	7,918
Vermont	131	3,074
Virginia	1,334	25,605
Washington	1,357	27,201
West Virginia	530*	16,228
Wisconsin	1,193	33,820
Wyoming	88	2,093
Total United States	**88,108**	**1,556,624**
Canada	3,600	41,611
Other Foreign (Incl. U. S. Possessions)	8,008	79,679
Total for World	**99,716**	**1,677,914**

*Includes Sales and Credits

Ranges Top Refrigerators In Knoxville Sales

KNOXVILLE, Tenn. — Electric range sales nosed out electric refrigerator sales 165 to 163 in September, according to reports of appliance dealers to the Knoxville Power & Water Board. Total sales value of refrigerators, was $28,734, as compared to $25,890 for ranges.

Sales of electric water heaters totaled 37 for the month, and 10 ironers, 222 washers, 92 vacuum cleaners, 815 radios, 76 stokers and oil burners, and one dishwasher were sold by appliance dealers. One air-conditioning system, with a sales value of $1,000, was installed. Total number of units of residential electrical equipment sold was 4,761, having a sales value of $158,640.

Commercial sales for the month totaled 68 units, with a total sales value of $19,311. Eighteen commercial refrigerators, with an average sale price of $297, were sold, and two ranges and one water heater were included in the month's commercial sales.

Public Will Pay $65,000,000 For Vacuum Cleaners In '39, Predicts Simmons

NEW YORK CITY—Sixty-five million dollars will be spent this year for vacuum cleaners, Richard J. Simmons of Birtman Electric Co., Chicago, and president of the Vacuum Cleaner Manufacturers' Association, predicted recently at the group's annual meeting here.

At the end of the first eight months of this year, vacuum cleaner sales totaled 879,543, compared to 838,395 units sold during the first three quarters of 1938. This is an increase of 4.8%. During September of this year, sales passed the 950,000 mark.

August sales were 96,601 units, an increase of 6.6% over the 90,557 units reported for August of last year and an advance of 25.9% over the July, 1939 sales figure of 76,689 units.

All officers and members of the executive board of the association were re-elected. Officers are: Mr. Simmons, president; P. A. Geier of P. A. Geier Co., Cleveland, vice president; and C. G. Frantz, Apex Electrical Mfg. Co., secretary-treasurer.

Members of the executive committee are, besides the three officers: Julius Tuteur, Electric Vacuum Cleaner Co., Inc., Cleveland; Fred Wardell, chairman of the board of Eureka Vacuum Cleaner Co., Detroit; H. W. Hoover, Hoover Co., North Canton, Ohio; C. G. Groff, Electrolux Corp., New York City.

Nine-Month Household Sales In Philadelphia Area Total 51,176 Units

Month	1939 Units Sold	1938 Units Sold	1937 Units Sold	1939% Inc. Or Decrease Over 1938	1939 Retail Value	1938 Retail Value	1939% Inc. Or Decrease Over 1938	1939 Average Price	1938 Average Price
January	3,366	3,123	3,135	+ 8%	$ 592,578	$ 564,097	+ 5%	$177	$180
February	4,797	3,797	6,119	+ 26%	871,598	664,574	+ 31%	181	176
March	6,517	4,826	9,051	+ 34%	1,178,035	848,012	+ 38%	180	175
April	4,828	5,961	9,452	— 18%	837,398	1,037,313	— 20%	173	176
May	9,206	4,812	9,743	+ 91%	1,556,314	832,319	+ 88%	169	173
June	9,374	3,623	9,103	+158%	1,592,453	627,475	+153%	169	173
July	5,285	3,237	7,435	+ 63%	893,294	575,856	+ 55%	169	178
August	4,305	3,936	4,725	+ 9%	716,795	693,344	+ 3%	166	177
September	3,498	2,617	3,762	+ 33%	581,864	457,278	+ 27%	167	175
Totals	**51,176**	**35,832**	**62,525**	**+ 42%**	**$8,820,329**	**$6,300,268**	**+ 39%**	**$172**	**$176**

Utility Accounts For 12% of Total Sales, Despite Higher Unit Prices

Totals	**6,211**	**2,954**	**4,706**	**+110%**	**$1,348,285**	**$ 575,283**	**+137%**	**$216**	**$194**

Note: Utility sales approximate 12% of total sales.
Report covers sales in Philadelphia, Bucks, Montgomery, Delaware, and Chester counties.
Report includes sales of the following makes: Coldspot, Crosley, Frigidaire, Gibson, General Electric, Hotpoint, Kelvinator, Leonard, Norge, Stewart-Warner, and Westinghouse.

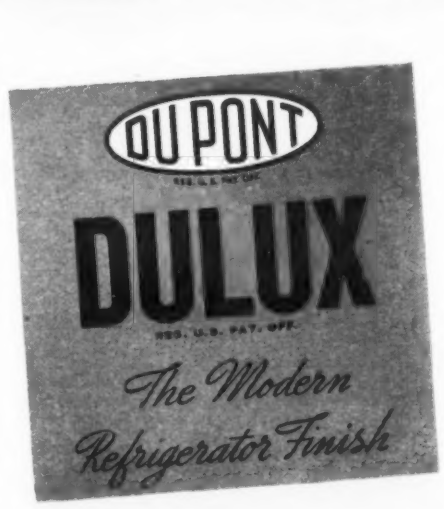
IT IS GOOD MANNERS TO POINT

...when you're selling refrigerators

POINT to the DULUX seal . . . the finish with the qualities *women* want!

Your customers will listen with interest when you tell them about the advantages of DULUX. A brilliant finish that *stays* white. Easy to keep clean . . . a quick rub with a damp cloth does the trick. Amazingly tough and durable. A finish that is resistant to chipping and cracking and the hard knocks of daily wear.

These sales points will make *your* refrigerator sales easier. It's good sense—and good sales manners—to point when you're selling . . . when you point to the DULUX seal! E. I. du Pont de Nemours & Company (Inc.), Finishes Division, Wilmington, Delaware.



IT'LL PAY YOU TO WAIT FOR

THE NEW FROZEN FOOD LOCKER

SENSATIONAL DEVELOPMENT

—new type of locker *revolutionizes* food storage plant locker rooms.

—based on a new principle which *slashes costs*, saves time.

WATCH FOR ANNOUNCEMENT

—soon in publications and by mail, full details about the new lockers which *lower initial investment* —permit easy low-cost expansion.

IF YOU'RE IN A HURRY

—and can't wait for the official announcement, write us today—we'll send you confidential data about this industry rocking improvement. You'll get one of the first catalogs off the press, too.

ALL-STEEL-EQUIP COMPANY
INCORPORATED
1111 Kensington Ave. Aurora, Ill.

Commercial Refrigeration Equipment As Used In the Modern Bakery

How the Baker Uses Dough Retarder Boxes

By William H. Cathcart, Research Dept.,
American Institute of Baking, Chicago

Editor's Note: This is the third and concluding article by Dr. Cathcart, an authority in the baking industry, on the application of refrigeration in the bakery field. Dr. Cathcart tells specifically where refrigeration is needed in bakery work, and suggests the best type of refrigeration to use in the various applications.

This article was first presented as a talk before the Chicago section of the American Society of Refrigerating Engineers and is published here through the courtesy of the A.S.R.E.

Retarded Doughs and Batters

The process of retarding doughs and batters consists of the subjection of yeast-raised doughs and chemically leavened (baking powder) batters to a sufficiently cold temperature so that all activity is stopped for all practical purposes.

The temperature necessary to accomplish this is about 35° F.[16] (it can be from 32 to 40° F.). A humidity of 85% or more must be maintained in order to prevent drying of the products. It also is very important that there be not too much humidity as sweating is very undesirable.

The refrigeration unit must be of such capacity that it will cool the entire box loaded with bakery goods to the proper temperature in the shortest possible time. Air movement should be slight to maintain uniform temperature[17]. However, it is very important that this air movement should not be very fast or drying will occur.

Since cooling must be quick as possible, the baker generally carries his process through until it is made up into the small units and then refrigerates them. When it is desired to bake the goods, it is first necessary to let them stand at room temperature for an interval to warm up and then put them in the pan-proof "box" for a period of fermentation (if a yeast product) before baking. About the maximum length of time that products can be refrigerated and still produce high quality products is 72 hours.

The most common products which are handled in this manner are Danish pastry, dough for sweet rolls and coffee cakes, cookies, layer cake mixes, and bun doughs. The application of refrigeration to these products for retarding the leavening action and making oven fresh goods readily available in the retail bakery is a relatively new development in the baking industry. However, it is stated that as early as 1888 refrigerated processes were used in Europe.

The main advantage, of course, is flexibility. Doughs can be made up and placed on the pan for baking, then refrigerated, and baked as they are needed. The advantages of refrigerated doughs have been summarized by Mr. Pirrie[18] from a survey of bakers throughout the country, as follows:

"1. Left over losses are greatly reduced.

"2. Additional bakes become possible when business is brisk.

"3. Rush orders are easy to handle.

"4. Oven-fresh goods may be kept in the bakery at all times during the day.

"5. Night work is greatly reduced, if not eliminated.

"6. Production schedules are simplified.

"7. The well known week-end shopping rush of the neighborhood bakery is relieved.

"8. The eating quality of the goods is improved.

"9. Sales increase."

Refrigerator processes of this kind are being carried out by the neighborhood retail baker, by the house-to-house branch of the baking industry, and bakers who have a chain of their own retail stores. According to Mr. Pirrie,[18] it is being considered by straight wholesale bakers to see if its economies fit their case.

There are many types of refrigerators suitable for this purpose. For the small baker there is the refrigerator which will accommodate bun pans and also compartments for ingredient storage. There are multiple unit boxes which contain only bun pans and can be added to to increase capacity. This is generally used by the larger retail bakeries. And then some bakers have cooling rooms which are reported as satisfactory.

In order for retarded dough processes to be successful, many precautions must be taken. The temperature and humidity must be right; if a leavening agent is used it must be slow acting; if a yeast product, the baker must allow for the fermentation which will take place while the dough is being cooled; oven temperature flexibility must be available for baking the varied products, etc. There is still much work to be done on retarded dough processes before the industry can wholeheartedly accept it.

Cold Slabs and Specialty Pastry Works

Before refrigeration was applied for retarding doughs, it was used for Danish pastry and other rolled-in products (shortening rolled-in) containing a high percentage of shortening. Pie crust doughs would also come under this heading. The doughs are placed in the refrigerator in the form of slabs. Refrigeration is used because it improves the flakiness of these products. The temperature and humidity of the refrigerator should be the same as used for retarded doughs and batters.

Cooled or air-conditioned work rooms are desirable, especially in the summer, for making up whipped-cream cakes and pies and other similar products. The temperature of this room should be 40-45° F.

Some products which the baker makes, such as custard and whipped cream products and some types of pies, must be refrigerated until they are consumed. They must be refrigerated in the bakery salesroom, thus the need for refrigerated show cases is evident. The temperature of these boxes should be 40-55° F., but not over 55° F. The products in the box generally supply enough moisture to the atmosphere.

Air Conditioning

Air conditioning as used above is meant to include the control of temperature, humidity, movement, and purity of the air. Outside of the uses for air conditioning mentioned above, there are few points in the bakery where it is important, except the bread slicing and wrapping and the cake make-up room.

It is very important here for keeping down the quantity of mold spores, bacteria, and dust in the air. The system should be operating so that it is removing as efficiently as is possible mold spores and bacteria from the air at all times. Of course, where it is economically possible, it is advisable to air condition the entire bakery and sales room.

The following table summarizes the optimum temperatures and humidities desired at various points in the bakery as given throughout this article:

* * *

Freezing of Bread

The freezing of bread to retard staling has been investigated quite thoroughly and is found to be fairly satisfactory. At the freezing point bread stales[19] faster than at room temperature.

Below freezing point, bread staling is retarded. At about —10° F., bread remained good for 20 days and at about —30° F. it remained good for 90 days[20]. The factor which limited the length of time the bread could be kept in good condition was the development of an undesirable aroma. Work is in progress at the present time to determine the cause of the development of this aroma.

A recent large-scale eating test showed that month-old frozen bread (about —10° F.) rated almost as high as fresh bread[21].

All of the experiments reported so far have been on "sharp" freezing methods in commercial freezers. It is hoped that in the future the work can be extended to include modern "quick" freezing methods.

Although at the present time the freezing of bread to keep it fresh seems to have some value to avoid the necessity of baking in lumber camps, on board ships, on holidays, and in some cases perhaps to cut down high cost, night work, frozen bread distribution on a wide commercial scale will require some research and new technique before it will be entirely satisfactory.

There are precautions to be taken; for instance, the bread must be wrapped in moisture proof wrappers throughout the freezing and thawing periods, the temperature must be low and sufficient time must be allowed for thawing.

Work is being carried on at the

(*Concluded on Page 21, Column 3*)

[16] P. C. Pirrie, Bakers Weekly, Aug. 28, 35 (1937).

[17] W. O'Brien, Western Baker, March, p. 46 (1938).

[18] P. G. Pirrie, Bakers Weekly, Jan. 21, 35 (1939).

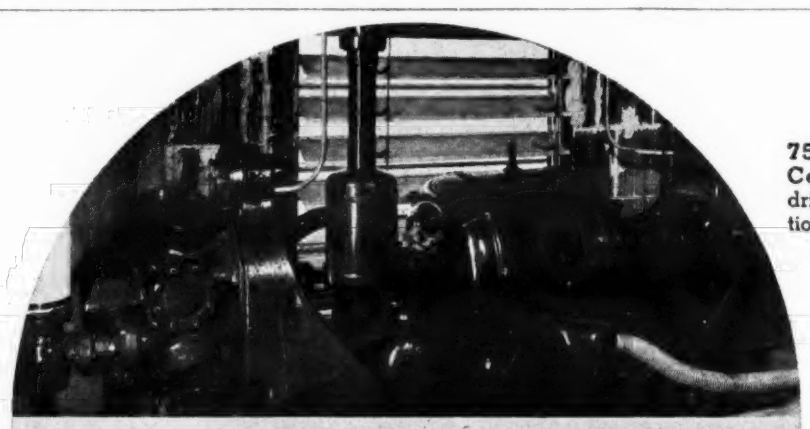
[19] Bread staling is not only loss of moisture but a change in the form of the starch. Recent X-ray studies show that as bread or other yeast raised products leave the oven, the starch has both a crystalline and amorphous component. As the product ages, the amorphous component disappears and finally all of the starch exists in the crystalline form. This makes the product harsh.

[20] W. H. Cathcart and S. V. Luber, Ind. Eng. Chem., 31, 362 (1939).

[21] W. H. Cathcart, Food Industries, Feb., 68 (1939) and April, 200 (1939).

Desirable Temperatures For Various Stages of the Baking Process - - Recommended Practices

	Ordinarily Desired Temp. (° F.)	Relative Humidity %
Flour Storage	65–75	55–65
Misc. Ingredients (Yeast, Eggs, Butter, etc.)	35–40	.....
Ingredient Water	32–40	.....
Yeast Dough When Mixed	78–80	.....
Fermentation Room for Yeast Dough	78–80	70–75
Proof Box for Yeast Doughs	94–96	80–85
Bread Cooler	70–75	80–85
Retarded Doughs in Mixer	70 or below	.....
Retarded Doughs in Refrigerator	32–40	85
Cake and Cookie Batters	Variable	.....
Cold Work Room	40–45	.....
Storage of Cream Products	40–45	.....



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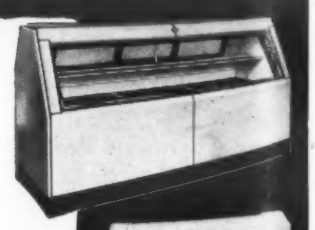

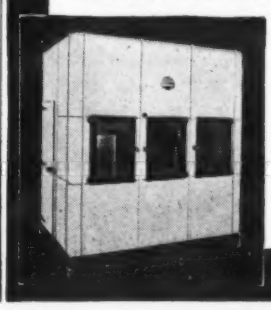

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Dough Retarder - - A Baker's Aid

Fig. 6—Retarded dough refrigerator for retail baker (photograph courtesy J. W. Allen & Co.). This is a built-in type, but there are also many smaller movable types on the market today.

Frozen Bread - - New Phase of the Business

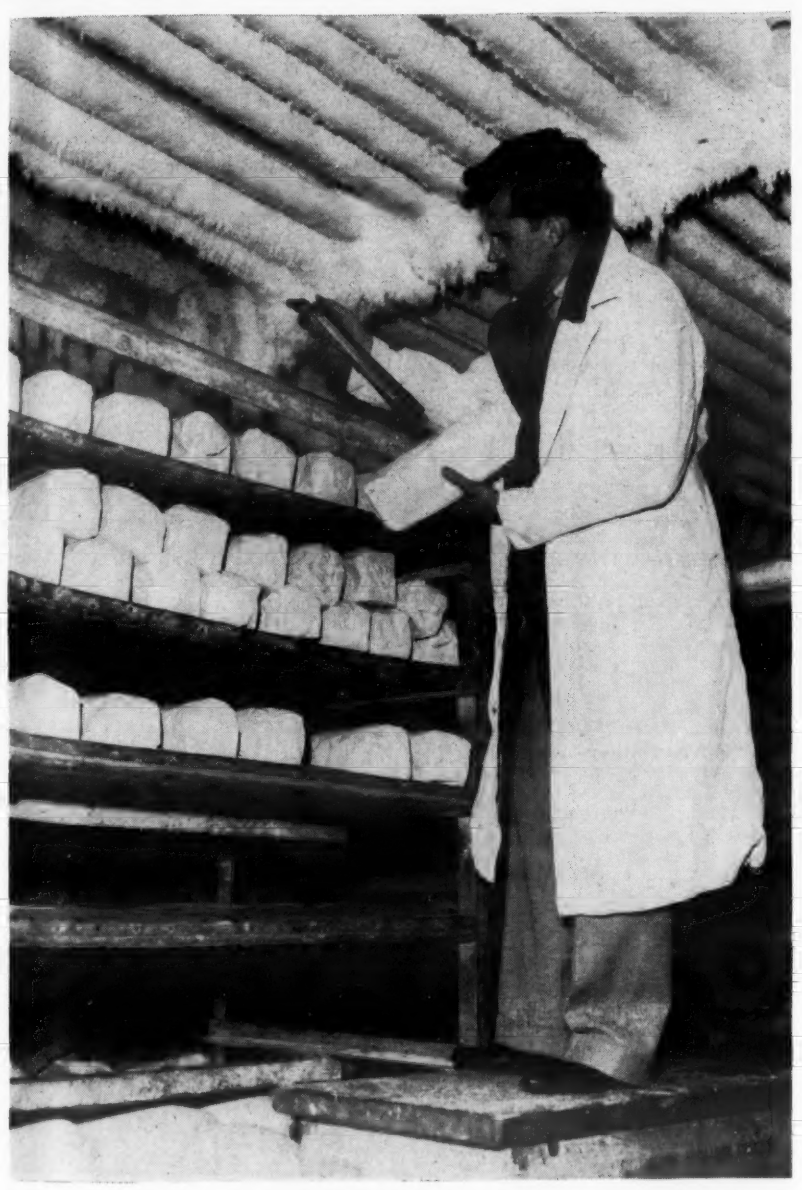

Fig. 7—Bread in a commercial freezer, with the loaves being frozen on the shelves. The bread is wrapped in a moisture proof paper.

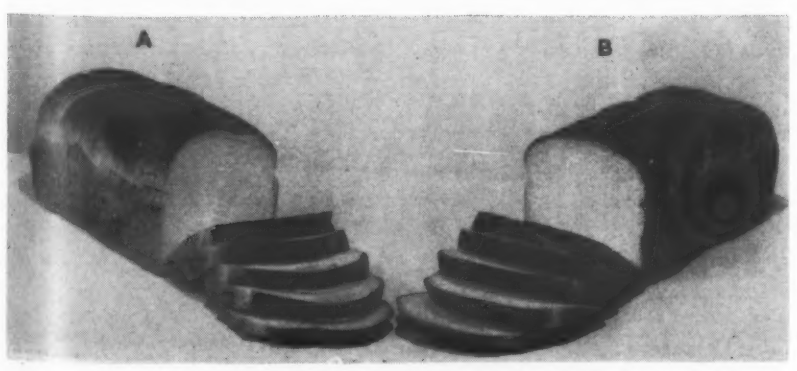

Fig. 8—In this picture "A" is fresh bread and "B" is month-old frozen bread after it has been thawed.

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Here is a practical and profitable way to correct over-taxed air-cooled jobs.

Install a SUPERIOR ECONOMIZER (Heat Exchanger) between the compressor and air-cooled condenser. Hook it up with a water valve, as illustrated. Set the water valve to open at the maximum desired head pressure. Then . . . when the temperature soars and head pressure would normally ring the bell . . . the water valve opens, admitting just enough water to the Economizer to keep the head pressure down to normal and the capacity up to par.

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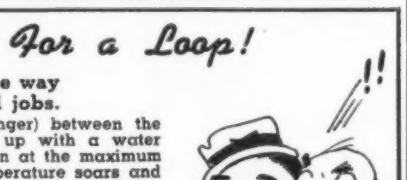

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Refrigeration Need Now Found In All Sizes of Bakeries

(*Concluded from Page 20, Column 5*)

present time on cakes and other bakery products. Preliminary tests show that "sharp" freezing methods are still satisfactory for cakes; however, "quick" freezing methods will be necessary with some other types of bakery products.

Conclusions

In many of the points where refrigeration is used in the bakery, there are other factors which must be controlled and which to some extent are indirectly related to the refrigeration problem. However, in this discussion it has been attempted to discuss only those things which are directly related to refrigeration, such as humidity control.

Although the problem of refrigeration as discussed applies to the baking industry as a whole, however, the requirements of each bakery are different and each baker must consider his problems and must install the type of cooling equipment which meets his particular requirement.

Although all types of bakery products can be made without any type of refrigeration it is necessary at some points of production, as mentioned, for the production, of uniform quality products and in order to keep production on schedule. Today, refrigeration is needed in some form for every bakery, regardless of size; there are variations from a minimum of an ice box in which perishables are kept, to complex systems installed for process controls.

The use of refrigeration in the bakery industry is spreading to more and more bakeries. It is being put to new uses. Experimentally it is being used, and possibly commercially in the future it will be used for the freezing of some types of bakery products.

Georgia Schools Place Big Equipment Orders

ATLANTA — Five institutions of higher learning in the state of Georgia have purchased electric refrigeration equipment from Georgia Power Co.

Emory university purchased some $4,900 worth of equipment, including built-in refrigerating rooms and special stainless steel reach-in refrigerators, for the school's hospital.

Ogelthorpe university bought $900 worth of new refrigeration equipment for its campus kitchen.

West Georgia College purchased a like amount of water cooling and refrigeration equipment from Haynes Wicker.

Agnes Scott college's water cooler order for $700 worth of water coolers was taken by T. W. Wilson.

Morehouse college in Atlanta refurbished its campus kitchen with $800 worth of new refrigeration equipment ordered through Nat Carswell.

Booklet Gives Data on Uses of Insulation

SAN FRANCISCO—Modern applications and practices in the commercial insulation field are outlined in a revised Cold Storage Manual on Palco Wool recently published by Pacific Lumber Co.

Diagrams and charts explaining the installation of Palco Wool in doors, ceilings, wall corners, and floors of coolers and freezers are included in one section of the booklet. A tabulation of the comparative insulation values of 38 different materials is another feature.

Thickness of insulation recommended for various temperatures is given, and calculations for figuring overall heat loss also are included. Two pages of photographs show Palco Wool in use in different types of applications, and views of how the redwood bark, from which the insulation is made, is processed in the company's plants.

Copies of the booklet are obtainable from the company's headquarters here, or from its branch offices in Los Angeles, New York City, and Chicago.

Persbacker Opens New Display Showroom

SCRANTON, Pa.—H. W. (Dick) Persbacker, representative in Lackawanna and Luzerne counties for C. V. Hill & Co., Inc., manufacturer of commercial refrigeration equipment, has opened a new display room at 140 Franklin Ave. here.

Please Your Customers with this . . .

NEW REFRIGERATION TEMPERATURE CONTROL

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with
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• SCALE SELECTOR . . A visible uniformly-calibrated dial turned by means of a shaft extending through the case that permits setting the scale for any 10 degree span from 20° to 75° F.

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• USER CONVENIENCE . . Enables the manufacturer or installer to provide for the user, the proper portion of the scale within the range of which any desired temperature may be selected. Permits the user to change the setting, easily, whenever load demand, application or other factors make it desirable.

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Service Questions

Factors In Converting An SO_2 Machine To Methyl Chloride

Landlord's Refrigeration Service
310 E. 149th St.
Bronx, N. Y.

Editor:

Would you be kind enough to assist us with a problem which confronts us in our shop work.

When converting a 1-hp. Kelvinator water-cooled sulphur dioxide unit to methyl chloride, at what speed would you drive the compressor in order not to overload the motor and still maintain the efficiency of a 1-hp. unit?

Is there a formula which gives the relation of piston displacement of a sulphur dioxide unit at a specific horsepower to the piston displacement of a methyl chloride unit at the same horsepower? In other words, if the piston displacement of a 1-hp. sulphur dioxide unit is 6,310 cubic inches per minute, what should the proper piston displacement of the same unit be if it were converted to methyl? Naturally, when a sulphur dioxide is converted to methyl, it is run at slower speed.

We would like to know at what speed it should be run in order to get the same B.t.u. output.

Any help which you can render on this subject would be sincerely appreciated.

H. LIPPNIN

Answer: One engineering authority to whom we referred this problem answers it as follows:

"At standard ton conditions, comparative theoretical volume displacements per ton are 5.95 cubic feet per minute for methyl, 9.08 for sulphur dioxide. Therefore, speed of sulphur dioxide machine charged with methyl should be slowed to about 5.95 ÷ 9.08 or approximately ⅔ of original speed to give approximately the same motor load and B.t.u. output at standard ton (5° suction temperature and 86° condensing temperature) conditions."

Correct Temperature For Beer Pre-Cooler

271 S. 15th St.
Philadelphia, Pa.

Editor:

Please give me some information on the following question.

"What is the right temperature in the box for a beer pre-cooler job working on forced circulation?"

FRANK PAUL

Answer: We referred this question to C. D. McLaughlin, refrigeration and mechanical engineer of Dayton, Ohio who has made an intensive study of the subject of beer cooling, and he has suggested the following answer:

"As far as box temperature is concerned in pre-cooler storage whether forced circulation or natural circulation is the method employed the recommended temperature is between 38 and 42° F. with an average of 40° F.

"From your question I would judge that you are experiencing some difficulty in drawing the beer even though the temperature might be regulated at that point. In this case I believe you will find that the beer is being delivered to the pre-cooler at a rather warm temperature and that it is being drawn before it has had time to settle and equalize to box temperature.

"When the beer in the package has risen in temperature during transit from brewery or distribution point it should be allowed to cool down again in the package before tapping. If it has remained at this high temperature in the package for some time a refermentation sets in which will alter the taste, and rapid pre-cooling at the spigot will not freshen it.

"Beer cools very slowly in the package and when it has warmed up to only 55° F. it will take the better part of a day in an atmosphere of 40° F. to bring it back within a couple of degrees of this latter figure.

"In the brewery storage coolers beer is kept from 32 to 36° F. It is drawn at 40° F. to give control in drawing and to insure clarity and sparkle when drawn. Good fresh beer may be consumed at much higher temperatures."

Data on Soda Fountain & Ammonia Servicing

2711 Barnett Way
Pittsburgh, Pa.

Sirs:

Will you please furnish the following information:

Do you publish a manual that gives information about installing and servicing soda fountains and ice cream cabinets, or machines handling carbon dioxide and ammonia.

JAMES W. BETHEL

Answer: We have just made available manuals which give complete information on servicing of all types of soda fountains, regardless of age or make. For an announcement of these books, see page 27.

For information on handling ammonia refrigeration equipment, we have published the Refrigeration Engineer's Manual, which deals exclusively with industrial installations. This book describes the construction of ammonia refrigeration systems, and discusses operating difficulties that may arise.

Replacements For Refrigerator Latch

The Bennett Mfg. Co.
East Home St. and Penna. R. R.
Westerville, Ohio

Sirs:

We will appreciate your advising us who can furnish repair parts, particularly the door latch for a Majestic electric refrigerator.

CHAS. R. BENNETT

Answer: Kason Hardware Co., 127 Wallabout St., Brooklyn, N. Y. might be able to supply you with door latches and other replacement parts for the Majestic refrigerator. You might also try the Arcade Mfg. Co., Freeport, Ill., and the National Lock Co., Rockford, Ill.

Service Data Sought On Truck Systems

A. W. Hammerlund Sheet Metal & Roofing Co.
717 Excelsior Ave.
Hopkins, Minn.

Editor:

Would you be so kind as to send me any information which you may have on the service and maintenance of heavy refrigeration plants in trucks, or tell me where I could obtain the information.

I am particularly interested in getting all the facts pertaining to the service and maintenance of refrigeration plants as I have an opportunity to work along this line, which will be an advancement for me in the work I am doing.

Mr. Scott of the Sheet Metal Worker thought that you would no doubt have this information or could refer me to some one who would have them.

A. W. HAMMERLUND

Answer: You will find much valuable information about servicing truck refrigeration systems in our series of Master Service Manuals on Commercial Refrigeration.

Manual No. C-1 in this series deals with the theory and principles of commercial refrigeration, properties of refrigerants, refrigerant cylinders, valves and safety devices, transferring refrigerants, dehydrating commercial refrigerants; Manual No. C-2 discusses, in some detail, commercial condensing units, water regulating valves, flooded evaporators and float valves, two temperature flooded systems; and Manual No. C-3 takes up expansion evaporators, thermostatic expansion valves, pressure controls, temperature controls, refrigerant control valves, and motors, starters, and overload relays. Each of these books sells for $1.

For information about cold plates used in such systems, would suggest that you write to the Kold-Hold Mfg. Co., Olds Tower building, Lansing, Mich.

Roesing To Distribute Cases In Florida

ST. PETERSBURG, Fla.—N. W. Roesing has taken over distribution of Super-Cold equipment on the west coast of Florida, with headquarters here.

Now Welding Is 'Streamlined'

Bastian-Blessing Co. exhibited an advanced streamlined design in welding equipment at the National Metals Congress held the week of Oct. 23 in Chicago. The equipment is claimed to make possible increased production output with decreased operator fatigue, and the picture here is used to demonstrate that even women visitors to the show, given the benefit of a brief explanation, were able to operate the equipment with good results.

Book Review

Steam & Hot Water Fitting

"Steam and Hot Water Fitting," Author: William T. Walters. Publisher: American Technical Society, Chicago. Pages: 184. Price: $2.

Application of all types of steam and hot water heating equipment is covered in this "how-to-do-it" manual on steamfitting. Purpose of the volume is to place before students, apprentices, steamfitters, and draftsmen the principles of good heating.

Boilers and radiators of all types are described, and layouts of various types of steam and hot water systems are explained. The book contains many line drawings, photographs, and tables, which are used to clarify specific points.

The final chapter is devoted to "Panel," or, as it is known in this country, "radiant" heating. The author predicts that some day this system of heating will be "as common as our present-day system of convection heating."

The chapter describes the radiant heating system used in the Johnson Wax Products factory at Racine, Wis., and the home of S. C. Johnson, Jr. in the same city. Frank Lloyd Wright, architect, planned both projects. The author also gives a formula which may be used for the calculation of radiant heating surface necessary for any installation.

. . . and most Refrigeration Service Men will be at the,
WOLVERINE—BOOTH 80
JAN. 15-18, 1940
ALL INDUSTRY EXHIBITION - CHICAGO
WOLVERINE TUBE COMPANY
1413 CENTRAL AVENUE DETROIT, MICHIGAN

YOU CAN TELL FROM HIS FOOTPRINTS HE'S HEADING STRAIGHT FOR THE BUSH DISPLAY AT THE REFRIGERATION & AIR CONDITIONING SHOW IN CHICAGO
'PON MY WORD, WATSON, IT'S PENGUIN PETE HIMSELF!
Dr. Seuss

Put the Bush Booth on your MUST list

Take a tip from Penguin Pete and plan RIGHT NOW to visit the Bush display at the 2nd Annual All-Industry REFRIGERATION AND AIR CONDITIONING EXHIBITION, Stevens Hotel, Chicago, January 15-18, 1940. There will be plenty to interest you at Booths 75 and 76 where the Bush advance line of refrigeration products will be shown. Don't miss this opportunity to get first hand information about the new Bush Recold Panel Coolers, Supreme Unit Coolers and Water Defrost Unit Coolers — products that are creating a sensation because of their advanced engineering, efficient performance and economical price.

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Commercial Refrigeration

Hotel's New Low-Pressure System Cuts Power Needed By Half, Does More Jobs

DENVER—Installation of modern refrigerating equipment in the Brown Palace hotel here has reduced by one half the horsepower requirements of the former system, and has at the same time permitted a number of additional uses not possible with the original equipment.

Built in 1892, the hotel originally was equipped with a steam-driven ammonia compressor rated at 25 tons capacity. This produced 4 tons of ice per day, and cooled a number of storage boxes in the kitchen by means of brine circulating from the ice tank. Engine was rated at 35 hp., and an additional 15 hp. was required for the steam-driven brine pump.

In installing the new equipment, the brine coils were removed from the boxes and replaced with direct expansion "Freon-12" coils of the finned type. Thirteen storage rooms are now used for the preservation of meats, vegetables, fish, bakery goods, and beverages. The storages are insulated with 4 inches of corkboard, and interiors are lined with tile.

Each storage room is equipped with a Johnson Service air-actuated thermostat, a combination solenoid valve, and a Detroit thermostatic expansion valve; these regulate the room temperature and flow of refrigerant. Coils in the 13 boxes are connected to a 7½-hp. low-pressure unit.

A game freezer in the hotel is kept at between 5 and 10° above zero, and is cooled by a separate 1½-hp. unit also using "Freon-12."

At the same time that these low temperature machines were installed, the hotel's original ice plant equipment was replaced with a new raw water plant using the F-P system. For carrying this load, a 5 x 5 combined ammonia unit was connected to a full-flooded vertiflow coil, installed in a new tank containing eighty 100-lb. cans. This equipment produces 4 tons of ice, which is harvested, placed in a small storage also connected to the ammonia machine, and later cut, cubed, or shaved to suit requirements.

Refrigerating equipment in the new system was installed by Kettering Co., Frick distributor in this area.

Marine Refrigeration Systems Installed For 2-Way Job on Alaskan Freighters

OMAHA, Neb. — Refrigeration equipment designed to carry quick-frozen fish from Alaska to Seattle and to transport quick-frozen beef and vegetables from Seattle back to Alaska has been installed on the S.S. Taku and the S.S. Tyee, 1,500-ton freighters of the Alaska Transportation Co., by Baker Ice Machine Co.

The two refrigerators in the main hold of the Taku and the three small boxes between decks have a total capacity of 20,000 cu. ft. A 4-cylinder Baker ammonia compressor maintains a constant temperature of 5° F. in all five boxes. Each box is separately controlled from the compressor room, where the remote bulb thermometers are located.

Condenser is of marine-type double pipe, and is composed of two stands each five pipes high. Receiver is of marine steel, measuring 10 feet in length and 12 inches in diameter. Coils consist of 5,000 lineal feet of 1¼-inch ammonia pipe on the walls.

The Tyee has a total of 22,000 cu. ft. under refrigeration. This space is divided between a huge locker in the main hold and three boxes between decks. Refrigeration equipment is identical with that on the Taku.

New Practices In Porcelain Enameling Work Described At Annual Institute Meeting

COLUMBUS, Ohio — Practical enameling shop problems applicable to electrical appliances and other enameled products were discussed at the fourth annual Porcelain Enamel Institute at Ohio State University Oct. 18 to 20. More than 200 persons were present, including visitors from Canada, Brazil, and India.

Opening session consisted of a symposium on the fine grinding of enamels, a new departure this year from the usual presentation of set papers.

E. C. Aydelott of Benjamin Electric Mfg. Co. led the discussion of these developments, assisted by E. W. Dietterle of American Stove Co.; C. T. Gordon, Porcelain Metals Corp.; J. B. Simon, Westinghouse Electric & Mfg. Co.; Norman Stolte, Enamel Products Co.; and G. E. Terry, Edison General Electric Appliance Co.

The second morning's session on sheet iron and hollow-ware included a talk on drawing compounds by G. W. Dykstra of Kelvinator division of Nash-Kelvinator Corp.

At the final afternoon session, R. F. Bisbee of Westinghouse Electric & Mfg. Co. discussed "Inspection, Packing, and Field Problems of Porcelain Enameled Products," describing the system of inspection on suppliers' products employed by Westinghouse in its Mansfield plant.

The use of such inspection, said Mr. Bisbee, should be a preventative rather than a cure of ills arising in the processing. Suppliers of several materials, including steel, are regularly graded on performance of their materials as they go through the enameling shop.

Mr. Bisbee outlined the development in recent years of improved packing methods and much better crating of porcelain enameled products, designed to maintain them in satisfactory condition during shipping and in the field.

Fruits, Salads, & Sauces Kept In Food Store's 'Beverage' Cooler

ALAMEDA, Calif.—Extra sales of fruit and vegetable juices, packaged fruit, salads, and sauces chilled in its reach-in refrigerator have followed the out-of-the-ordinary use to which the Hagstrom Food Store here has put its equipment, purchased originally for bottled beverage and dairy products storage.

The store's cashier suggests the chilled products as he checks customers' purchases. As many as a dozen cans of fruit juices have been sold to a single customer, the store reports. Chilled cranberry sauce and similar sauces were sold from the refrigerator in warm weather, when their use in the Sunday dinner is suggested.

Results have been so satisfactory that the market plans to make its "chilled goods" a year-around service, emphasizing different beverages and sauces applicable to the various seasons.

Nabiloff New Super-Cold Distributor In San Diego

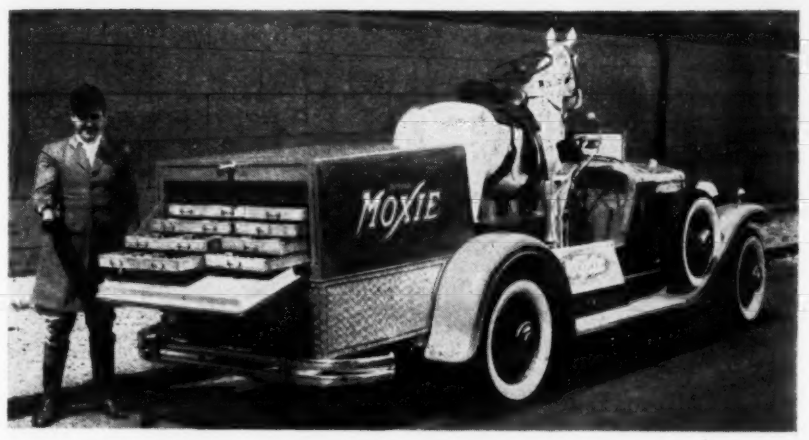
SAN DIEGO, Calif.—Jack Nabiloff has taken over active distribution of Super-Cold commercial refrigeration products in this territory. He has had several years association with the former Super-Cold distributor here.

Refrigeration Tops Power Firm's Commercial Sales

ATLANTA — Far and away the biggest factor in commercial sales of Georgia Power Co. for the first nine months of the year was the $156,096.59 sales volume rolled up in the refrigerator and water cooler department.

Another $24,457.80 was accounted for by cooking and heating appliances, while sales of ventilating fans for the first three quarters totaled $49,717.87.

'Horsemobile' Is Cooled By a Mechanical Unit



Soft drink samples are delivered cold by means of this truck, the refrigerator compartment being cooled overnight by a mechanical unit.

• • •

BOSTON—"A-hunting we will go" is the sales cry of the Moxie Co. this year, as it tracks down business for its bottled beverage products with the "horsemobile," a refrigerated mobile unit used to distribute samples of the drinks.

A large model of a white horse is mounted on an automobile chassis, and is driven by a gentleman garbed in the colorful costume of the huntsman. Bottled beverages are kept cold by means of special refrigerating equipment designed and built by Frigidaire.

Bottles are arranged in a horizontal position on a perforated steel bottom in sliding drawers. The refrigeration cabinet is tilted at a 10° angle so that the bottles will roll to the front of the drawers, each of which is provided with an insulated front and built to fit tightly into the framework. When the insulated door of the cabinet is opened, the door fronts provide an insulated barrier to conserve the cold air in the cabinet.

The cabinet is constructed of galvanized steel, with 4-inch corkboard insulation on all sides. When on tour, the operator loads the cabinet at night, removes the cover from the refrigerating unit, and plugs into a 110-volt, single-phase circuit. The unit operates automatically during the night, and the following morning the beverages and the cabinet have been reduced to the proper temperature. All of the mechanical equipment is enclosed in the unit compartment. The unit does not operate while in transit.

5 STAR CONTROL

More Accurate
More Dependable
More Compact
More Attractive
Easier to Install

C-H BULLETIN 9508

THE NEW CUTLER-HAMMER LINE THAT MEETS EVERY NEED OF MODERN COMMERCIAL REFRIGERATION AND AIR-CONDITIONING

Full and comprehensive knowledge of the needs of the cooling and refrigerating fields dictated the design and construction of the new Cutler-Hammer Control for commercial refrigeration and air conditioning.

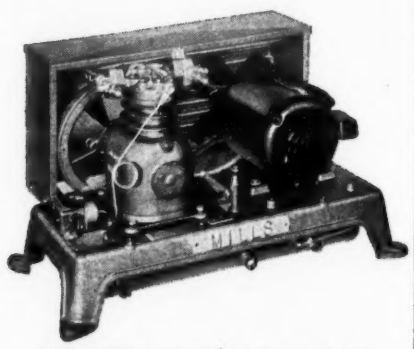
And here in 4 models—temperature, pressure, high pressure cut-out or a combination of temperature, or pressure and high pressure cut-out, is a line that applies to more than 95% of all recognized installations . . . from ⅓ hp. to 150 hp. It presents a new simplified design, a dependability and accuracy of operation positively unique. It presents as well marked advantages in ease of wiring and installation, easier, simpler range adjustments, a wider range of operation, and so many other unique advantages it is impossible to list them here. It is the old story of Cutler-Hammer leadership again, of broad knowledge and experience gained in *many* fields and applied to *this* field . . . with the result that this Control stands alone. This new *advanced* Cutler-Hammer Commercial Refrigeration Control is available, on request, on all leading Refrigeration Equipment. Write for full descriptive literature. CUTLER-HAMMER, Inc., *Pioneer Electrical Manufacturers,* 1362 St. Paul Avenue, Milwaukee, Wisconsin.

CUTLER-HAMMER
MOTOR CONTROL
C-H

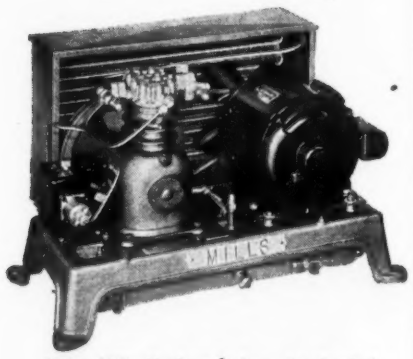
FOR MOTOR CONTROL TO MATCH C-H BULLETIN 9586 Write for descriptive literature

The 4 Most Popular Mills Condensing Units

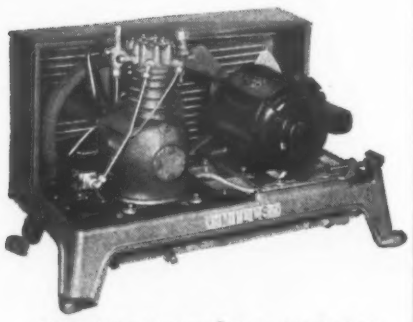
See Them at Booths 137-138



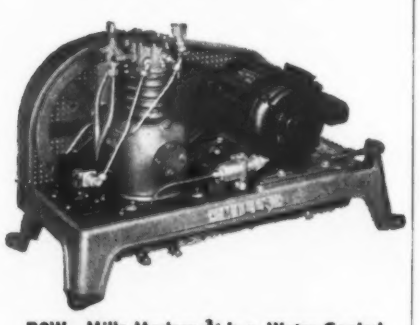
B1A—Mills Modern ⅓ h.p. Air Cooled



C1A—Mills Modern ½ h.p. Air Cooled



D2A—Mills Modern ¾ h.p. Air Cooled



D2W—Mills Modern ¾ h.p. Water Cooled

Mills Novelty Company
4100 Fullerton Ave., Chicago, Ill.

Service Men's Problems

The Self-Reliant Graduate Doesn't Need Much Help In Finding a Job

83 S. Miami St.
Wabash, Ind.
Oct. 28, 1939

Editor:

Several letters appearing in your publication recently have interested me very much; mainly because they pertained to a field I am in and also because they were both for and against present-day correspondence schools for teaching air conditioning and refrigeration.

I am a graduate of one such school and highly satisfied with my course of training, both home and laboratory; and further with the contacts this organization has maintained with me since my graduation.

This school did not get my job for me. They did not help, nor did their course of instruction help me to get it. *But*, that course of instruction has helped immeasurably in my holding to my job, getting one promotion, a substantial pay increase, and a promise of another in less than one year.

The main thing is that I am employed in the manufacturing end of the air-conditioning field, making friends, and a good reputation. I am also in a splendid position to continue my correspondence school studies (this is approximately my third journey through their course of studies) and also to learn quite a number of things that were covered in the course only to a small degree.

Insofar as expecting an institution to maintain an employment department, and expecting a guarantee of a position from such, is just a bit more than I can thoroughly understand from any student. I most emphatically did not expect my school to get me a position and I still have no intention of using their employment department for anything other than a survey of my studies, grades, and accomplishments, if any.

Personally I feel that a man who shows enough thought to study at home in order to better himself, should also show enough sense of self-respect, self-reliance, or plain old pride in himself to go out and sell himself to somebody who needs him, and afterwards to prove he wasn't just a "passing fancy."

Sometimes looking for a job in a chosen profession can be a heck of a lot of fun. I know. In time I hope to go higher and farther in the air-conditioning field, and I know that no matter how far or how high I might go the school that trained me will always be interested in my progress.

DAVID A. THOMPSON

Gilmer's "Eye-ful" Tower

your complete "on-the-counter" belt department in a carton!

Ready to set up and sell at a profit of $13.92!

FROM a profit standpoint, Gilmer will stack this aggressive silent salesman against any comparable 15 inches of counter space in your store. This go-getting Merchandiser returns *almost a dollar profit* for each inch of counter space invested in it!

GILMER'S "EYE-FUL" TOWER consists of these items:

1 The Gilmer "Handimeter"—a slide-rule type of measure, as easy to use as it is accurate. Measures instantly any belt brought in, up to 75" long and between ⅜" and ¾" wide.

2 The "Eye-ful" Tower—a circular stand, 15" in diameter at the base by 32½" high, with eight hooks accommodating 70 belts, and giving them good display from any angle. Atop the tower, a high-visibility display sign, on back of which is a perpetual inventory record form.

3 35 *fast-selling* Gilmer belts for refrigerators and other appliances.

Now SELL MORE BELTS!

With the "Handimeter," you can quickly and accurately replace a belt for leading makes of refrigerators and other appliances. Plus the copy of "America's Belt Bible," the complete Gilmer Catalog, a window display card in colors, which is also included in the carton, you'll start ringing up belt sales!

Package costs	$19.36
You get	33.28
YOU MAKE	13.92

L. H. GILMER COMPANY
Tacony, Philadelphia

Send me complete Gilmer "Eye-ful" Tower assortment. Bill me $19.36 through your nearest jobber.

NAME _____

ADDRESS _____

Beginner Wants a Chance To Learn, Plus Good Wages

3746 N. Plainfield Ave.
Chicago, Ill.
Oct. 16, 1939

Dear Sir:

After reading the Service Men's Problems for the past few weeks I decided to throw my hat in the ring. If we all air our views on the correspondent school graduate's employment problems, maybe we or someone who reads them can find a solution or compromise for them.

A year ago last January I completed a course at R.A.C.I. and thought that inside of a month or two would be started working at the trade. Having contacted a few prospective employers previously, I learned that the business does not pick up until March or April and they suggested that I call at that time.

An old proverb taught to me in my young years, goes:—"Don't throw away the dirty water until you have clean," so I continued with my old job.

About the time of the second call, the so-called "Business Recession" was in swing, so they could not consider adding an extra employe with their regular men working part time.

What would you do? Well, I decided to wait for my chance and keep up with the industry, start buying tools, and do some work on my own in spare time. Finances and bad business in general kept me from going into business at that time.

One executive advised me to keep working and get into and learn as many lines of business as possible as air conditioning will get into everything eventually.

Well, I continued with my job so that I could buy some tools and keep experimenting.

This spring I was all prepared to get started but there were more obstacles in my path. One was that the union here in Chicago prevents hiring even apprentices that are not union and the other was that I lacked experience. Disgusted was hardly the word for me. I paid for my schooling, for my tools, for my experimenting, so now I'll have to pay for my experience. That wasn't so bad because I spent my vacation carrying a service man's tools around. By that time the season was half over, and who wants to accept a job for a few weeks or a month at a low rate of pay for a steady one of twice the salary?

Now, as I mark time, with Fate laughing in my face, and employers smiling at and sympathizing with me I can only blame myself for believing too much of a salesman's talk that the refrigeration industry is crying for trained men. How in the world can a man get training and experience if they don't give him a chance? Didn't we all have to start out sometime? When they get a good man they don't want to pay him good wages.

However, you can't kill a man for trying.

Respectively yours,
EDWARD H. SZABO

P. S. The AIR CONDITIONING NEWS helps me keep up with the industry best of all periodicals.

Practical Training By Correspondence Originated In 1891

SCRANTON, Pa.—Correspondence school training has been praised and criticized on all sides. Its critics dismiss it as a poor excuse for resident schooling, but thousands of "graduates by mail" cite material benefits as proof that correspondence training can be a real boost up the ladder if a man is willing to supplement hard work with hard study. Rufus H. Strohm, dean of the faculty at the International Correspondence Schools here, has spent almost forty years teaching by mail, and is convinced of its merits.

"We have trained over four million students all over the world since we began in 1891," Mr. Strohm said, "and we believe that successful correspondence training depends on the ability of the school to assist the student in choosing an occupation that is best suited to his ability and experience, to assist him in preparing for that occupation, and to aid him in entering and in progressing in the chosen occupation. That is our job. The success we have, and the success the student has, depends on his ability to make use of the educational tools we supply."

The majority of those who enroll for courses in the I.C.S. know what they want to study, according to Mr. Strohm. The vocational guidance of the school is valuable in keeping a man moving toward a higher place in his chosen field, he says. It is not a question of "dipping in the hat" for an occupation that looks good at the time. The claim is made that 95% of the students who seek training at the I.C.S. are employed at the time of enrollment, and 80% of them enroll for courses directly in line with their occupation. The average age of students who enroll is 26 years.

This idea of making good in the job you have and preparing for a bigger one is "sold" to students of the school. In the vast records department of the school, where the records of millions of students are kept, Dean Strohm illustrated the idea. He picked out at random the record cards of students in many branches of training and pointed out in almost every instance that the student was studying subjects directly related to the occupation in which he was then engaged.

When a student applies for training, his past experience, training, and indicated abilities are considered in offering the vocational guidance. "This not only benefits the student," Mr. Strohm said, "but is a definite benefit to the employer. At the time he is studying, the student can apply his improvement to the job he is then working at, and gets a double benefit of experience and spare-time study."

Many employers, according to Mr. Strohm, have recognized the distinct advantages of correspondence training for their employes. He showed letters from employers who commented favorably on the increase of efficiency gained from such training. One letter from a southern police official showed that a great many of his men had enrolled for training which would aid them in their work. He was surprised and delighted that his men sought such improvement.

More than 2,000 firms now have agreements with the I.C.S. whereby employes receive training. On the request of either employe or employer, the school will send reports to a designated executive of the firm so that a check may be kept on the educational progress of the student. In this way, an employe-student may receive recognition which may lead to advancement.

The training by mail idea has grown rapidly. The I.C.S. has the largest enrollment of any single institution in the history of education. The school grew out of a column on technical questions which ran in a small Scranton mining journal. As coal mining was in a period of rapid expansion in this anthracite area late in the last century, a demand was created for a course in coal mining. The first student was enrolled in this course in 1891.

Men in other industrial fields began to seek aid from the new school, and courses were added as soon as they could be prepared. By 1910 a total of nearly 1,400,000 had enrolled. To many the school represented the only way to gain an education; to others it was the way to improve in their chosen occupation.

The old question in correspondence school training naturally arises—Does the school guarantee jobs and wage increases to those who enroll. The answer given by the I.C.S. is a flat "no." The school maintains that no reputable school, college, or university will make such promises. They do maintain a service which reports educational progress to the employer (explained previously). Recommendations, based on the student's progress, are also sent to prospective employers at the request of the student.

"The rest," says the I.C.S. to its students, "is up to you." Correspondence school training has become a really big business, and the value of its service to students cannot be measured on the efficiency of the school alone. It depends also on what the student does with that "up to you" angle.

Read It At Home

907 Grove St.
Lansing, Mich.
Oct. 25, 1939

Sirs:

May I have the name, Motor Wheel Corp., struck out of the mailing address you place on copies of "AIR CONDITIONING & REFRIGERATION NEWS" that you send me? Then the paper would come directly to my home, eliminating delay and confusion at the plant. I'd appreciate your doing that.

Let me, also, compliment you on your fine publication. It is a help to me in getting acquainted with conditions in the various fields covered by your news and articles, and should be of assistance to anyone wanting such knowledge.

RUDOLPH S. SODERBERG

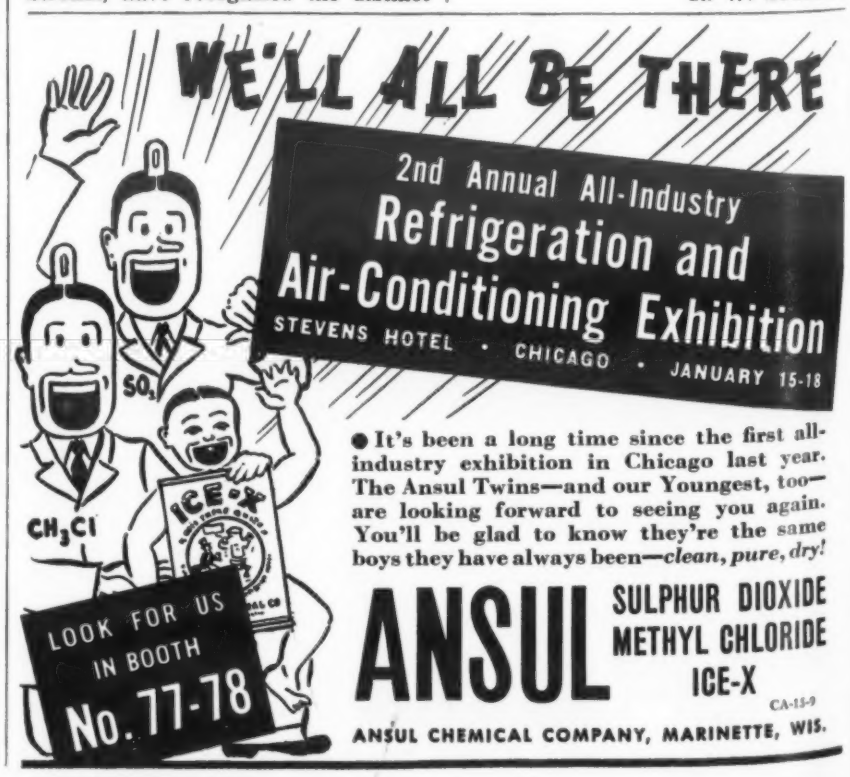
Pleased With Manuals

P. O. Box 1214
Cristobal, Canal Zone
Oct. 7, 1939

Sirs:

Inclosed find money order for $1.00 to cover cost of Commercial Service Manual No. C-1. Received Manuals C-2 and C-3. Very much pleased with them.

R. W. SCHMIDT



● It's been a long time since the first all-industry exhibition in Chicago last year. The Ansul Twins—and our Youngest, too—are looking forward to seeing you again. You'll be glad to know they're the same boys they have always been—*clean, pure, dry!*

ANSUL SULPHUR DIOXIDE
METHYL CHLORIDE
ICE-X
CA-15-9

ANSUL CHEMICAL COMPANY, MARINETTE, WIS.

Air Conditioning

Theater Operators File Objections To Detroit Refrigeration Code

DETROIT—Specific objections to certain portions of the proposed Refrigeration Code, which is now before the Common Council of the City of Detroit, were filed last week with the Council by Thomas McGuire, director, Co-Operative Theaters of Michigan.

Opposition centered on the application of the code to "minor" alterations, lack of limitation on various fees, structure of the "Board of Examiners" which grants licenses, the sale of "Freon" only through licensed contractors, the use of high temperature solders or mechanical joints, the duplication of pressure limiting devices, and the requiring of gas masks in certain buildings.

In a letter to Councilman John Kronk, Mr. McGuire pointed out that Section I, administrative section of the code, "requires a permit for the most minor change one might wish to make in a present system. The term is too broad and it is our belief that this ordinance was meant to cover only installations and major alterations. We request that the word 'alter' be removed from the section.

"Subsection 1.30 of Section I permits unlimited 'fees' for permits and licenses. Some definite protection from possibly exorbitant fees should be made to safeguard the contractors and consumers affected under this code.

"Subsection 1.35 requires annual inspection (at another fee) to be made on all units in excess of 1-hp. capacity. This limitation should be raised to 3 to 5 hp., preferably the latter, as there can be found very little excuse for an annual inspection of these small units."

(Under the Detroit Building Department "fees" of various kinds are established by the "Board of Rules," which is an advisory body to the Department. Elimination of inspection fees on units up to 5-tons would mean that 3-ton self contained units would not require inspection.)

"Subsection 1.55 of Section I," the letter continues, "provides for the creation of a 'Board of Examiners' to consist of three members of the Building Department and two contractors. This is not a very democratic body when it is pointed out that no contractor can get a license to operate under this code unless the 'Board of Examiners' approves." Mr. McGuire requested that one, or possibly two more members be added to this board "so that consumer interest is amply protected."

The theater owners consider that the restriction of the sale of "Freon-12" under the proposed code to "licensed contractors" is an "unfair restriction on the consumer and supplier" and they ask that theater owners be permitted to buy "Freon" direct from the suppliers.

Objections to the "mechanical joints" and "high temperature solders" required under the code were stated on the ground that they would "greatly increase cost to the consumer, and provide no additional safety to the consumer."

Subsection 13.52 of Section 13 is objected to on the grounds that the "automatic high pressure cut-outs" and "pressure limiting devices" required on all compressors used in air conditioning are a duplication of safety features and that only one of these devices is necessary. Common practice is to install "high pressure cut outs" on all jobs, but not to supply the additional "fusible plug" required under the code.

Mr. McGuire's letter states that the theater owners "see no earthly use for a mask," in view of the fact that the concentration of refrigerant shall be below that shown in Table B (safe concentrations established by the Bureau of Mines).

The letter concludes with the statement that "our membership includes over 75 Detroit theaters who would be adversely affected if these changes are not made."

Objections filed with the Common Council have been turned over to the Building Department of the city and a special hearing on the code is planned for the purpose of discussion with representatives of the theater owners and others interested in the legislation.

Engineers, Executives, and Physicians on Speakers' List For Lehigh Conference

BETHLEHEM, Pa. — Reservations for the Eastern Air Conditioning Conference to be held at Lehigh university Nov. 10-11 are being accepted by Prof. B. H. Jennings, chairman of the conference committee. Sponsored by the A.S.R.E., the Philadelphia Chapter of A.S.H.&V.E., and the Air Conditioning Manufacturers Association, the two-day meeting is expected to attract members of the industry from a broad geographical area.

A. R. Stevenson, Jr., of the General Electric Co. and a past president of the A.S.R.E., will be chairman of the opening session. Speakers for this session will be Carl F. Boester, consulting engineer, who will discuss "Refrigeration Storage for Handling Peak Loads"; John R. Hertzler of York Ice Machinery Corp. who speaks on "Hotel Guest Room Air Conditioning Practices"; and S. R. Lewis, consulting engineer of Chicago, who will present an "Analysis of Air Conditioning for an Educational Building."

The afternoon session will be devoted to hospital air conditioning under the chairmanship of Prof. Frederick E. Giescke, of College Station, Tex., president-elect of the A.S.H.&V.E. At this meeting, "Air as a Vehicle in Contagion" will be discussed by Dr. W. F. Wells, of the University of Pennsylvania School of Medicine; "A Realistic Approach to Hospital Air Conditioning" will be presented by C. F. Neergaard, hospital consultant of New York City; and the "Uses of Air Conditioning in Hospitals" will be treated by M. B. Ferderber, M. D. of Magee Hospital, Pittsburgh.

At the end of the first day sessions a get-together banquet will be held at the Hotel Bethlehem, when "The Air We Breathe" will be the subject of a talk by Prof. Philip Drinker of the Harvard School of Public Health. Col. Crosby Field will be toastmaster at the banquet.

Dean A. C. Callen of Lehigh university will preside over the final sessions of the conference on Saturday morning, Nov. 11, when "Moisture Removal from Blast Air" will be discussed by L. L. Lewis, vice president of Carrier Corp. Other speakers include J. C. Albright of the Marley Co. who will talk on "Climate and Air Conditioning"; J. L. Rosenmiller, chairman of the public relations committee of A.C.M.A., will discuss "Creating a Demand for Air Conditioning."

Conditioning Units To Help Diplomats Keep Cool

WASHINGTON, D. C.—Members of the diplomatic service will be able to keep cool heads next summer both here and abroad, if installation of air-conditioning units in their offices is a good index.

Cooling units have been installed in the Brazilian, Belgian, and Polish embassies and the Egyptian, Panama, Swedish, and Canadian legations.

In foreign countries, many of which regard air conditioning as a necessity, equipment has been installed in the Rumanian Legation, Tokyo; American Legation, Baghdad; Imperial Iranian Legation, Baghdad; British Embassy, Baghdad; U. S. Consulate, Colombo, Ceylon; Italian Consulate, Singapore; and the Counsul Kalle Aapro, Rio de Janeiro.

Casement Weather Strip Developed By Goodrich

AKRON, Ohio—Development of an extruded rubber weather strip, for use where casement windows are installed in an air-conditioned building, has been announced by B. F. Goodrich Co. here, following extensive tests in Minneapolis and Des Moines.

The tests were conducted by G. M. Grady of the engineering department of the Flour City Ornamental Iron Co. of Minneapolis, in connection with the installation of casement windows in the air-conditioned Bankers Life Building in Des Moines.

The testing engineers found that when casement windows are used in connection with air-conditioning equipment, infiltration of air and moisture should be kept at a minimum.

Performance of the extruded strip is claimed to be as much as 200% more efficient than plain and treated felt heretofore used as weather and insulation stripping. Infiltration was reduced 72% more than with plain felt, and it was found that it was 57 to 75% more effective than various types of treated felt.

The new product is said to have a low free sulphur content, with little tendency to tarnish bronze and brass.

Buffalo Gets $125,000 Order

BUFFALO—Buffalo Forge Co. has received a $125,070 order from the U. S. Navy for ventilating equipment.

47 Cooling Installations In N. Y. During Sept.

NEW YORK CITY — Forty-seven installations of air-conditioning equipment were made in the New York metropolitan territory during September, reports compiled by Consolidated Edison Co. and its subsidiaries indicate.

This compares with 23 installations made during August, and 42 during July, and brings the territory's total for the first nine months of 1939 to 430 jobs.

September installations included 18 retail stores, seven doctors' offices, five restaurants, and six World's Fair jobs.

Tabulated list of installations for the first nine months of the year shows:

Residences	15
Banks	3
Barber-Beauty Shops	5
Broadcasting Studio	1
Clubs	2
Hotel Guest Rooms	2
Hotel Public Rooms	15
Office Buildings	3
Doctors' Offices	7
Miscellaneous Offices	38
Lecture Room	1
Restaurants	126
Showrooms	20
Department Stores	10
Retail Stores	102
Theaters	14
Funeral Parlors	6
World's Fair	40
Bowling Alley	1
Miscellaneous Commercial	5
Drug Mfg.	2
Laboratory	1
Storage	1
Bakery	1
Candy Mfg.	3
Fur Storage	1
Miscellaneous Industrial	5

Air Conditioning Adds To Music's Charms

HONOLULU, T. H.—Air conditioning has relieved the atmosphere of tropical heat and humidity in Montague Hall, music conservatory of the Punahou private school here. Students report that the building is the most popular place on the campus since the equipment was placed in operation.

Faculty members explain that under the even temperature now possible in the building, grand pianos and other instruments are easily kept in perfect condition. With windows and doors tightly closed, those attending classes near Montague Hall are spared the endless serenade of a busy music school.

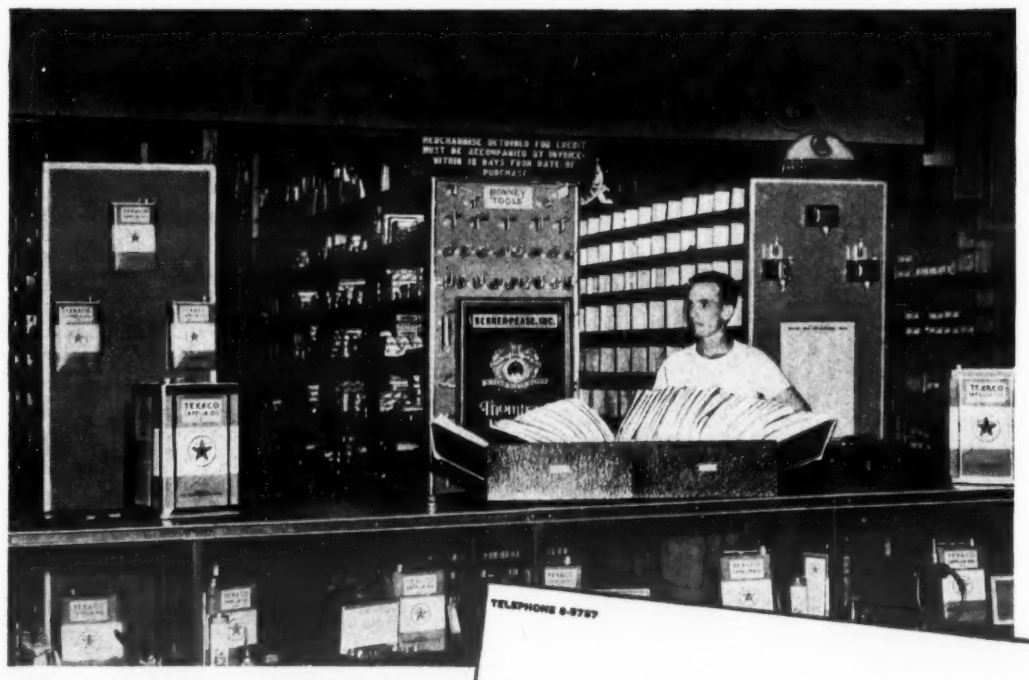
Frigidaire equipment was installed this summer during the vacation period by von Hamm-Young Co., Ltd., Hawaiian distributor.

Montague Hall, which was endowed by the F. C. Atherton family, is believed by Verne Waldo Thompson, director, to be the only fully air-conditioned music conservatory in existence.

80-Ton Job For Theater

SOUTHBRIDGE, Mass.—A year-around air-conditioning system of 80-tons capacity has been installed in the Strand Theater here by Air Conditioners, Inc., Boston. This same company also recently completed installation of a 25-ton system in the Stuart Theater, Boston.

SALES INCREASED "TREMENDOUSLY"



WELL-STOCKED refrigeration supplies department of Berner-Pease, Inc., Miami, Florida. Read what they say of Texaco Capella Oils.

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'Finishing Touches' on Old Boxes

Detailed Instruction For (1) Patching of Dulux Panels and (2) Complete Refinishing

By the Finishes Dept., E. I. du Pont de Nemours & Co., Inc.

Editor's Note: With the reconditioning of used refrigerators growing in volume each day, this information on refrigerator finish touch-up and repair work is particularly timely and valuable. Specific instructions for making old cabinets look like new is the aim of this article.

From time to time, we have issued instructions in regard to servicing refrigerators. In order to make sure that you know how this matter stands at present, we are summarizing it as follows:

The subject of servicing Dulux refrigerator finishes may be conveniently divided into two sections: first, the patching or refinishing of panels and, secondly, the complete refinishing of the cabinet.

104 LINE BAKING DULUX

In order to clarify the use of patching materials for refrigerator Dulux, it is first desirable to review the color changes that will be undergone by a Dulux finish from the time that it is freshly baked by the refrigerator manufacturer until it has seen several years of field service.

The first baking Dulux used by refrigerator manufacturers, and still used by many, is known as 104 Line Dulux. This product has a slight cream cast as it comes from the manufacturer's oven. This cream cast will disappear upon exposure of the finish to the light, leaving the finish actually whiter. This process is known as bleaching and will require only two hours for completion in strong sunlight, whereas it may take days or weeks, or, in a few cases, months for complete bleaching in indirect or diffused light.

Obviously enough, as most finished cabinets are never exposed to strong sunlight, refrigerators when received by a dealer for sale may not be completely bleached, particularly as no bleaching can occur in the crate. After the finish has reached the end-point of bleaching, it begins to assume a very gradual change toward a cream tone. This change in color is extremely slow and under normal service conditions is noticeable only by comparison with the original color. This gradual change continues throughout the refrigerator's life.

PATCHING 104 LINE

For the patching of 104 Line Dulux, we recommend the use of 236 Line Duco. Two products are offered in this connection:

236-1136 Duco refrigerator white (matched in color to bleached 104 Line Dulux).

236-1050 Duco refrigerator cream white (matched in color to aged baking Dulux).

It is obvious from the above explanation of the color changes which take place that all new 104 Line finished cabinets should be patched with 236-1136, as the finish, if not already bleached will bleach to this color before long. Although the 236-1136 patch may seem slightly white by comparison with a partially bleached finish, it will be less objectionable than a patch which matches at the time and later appears yellow due to further bleaching of the cabinet.

For cabinets which have been in service, a blend of 236-1136 and 236-1050 should be used to match the color of the finish. 236-1050 is matched to the color to which a Dulux baking finish will drift after about five to seven years' service.

As mentioned above, these 236 Line Duco materials are recommended for patching and also for the refinishing of panels.

704 LINE BAKING DULUX

The other type of baking Dulux used by refrigerator manufacturers is known as 704 Line Dulux. This finish, although similar to 104 Line Dulux in many respects, has a considerably smaller degree of bleach, and is slightly whiter in color than 104 Line Dulux. With age, this finish likewise gradually drifts toward a cream tone.

PATCHING 704 LINE

For the patching of 704 Line Dulux also, we recommend the use of 236 Line Duco. Two products are used:

236-1011 Duco refrigerator white (matched in color to bleached 704 Line Dulux).

236-1050 Duco refrigerator cream white (matched in color to aged baking Dulux).

As in the case of 104 Line Dulux, new cabinets should be patched with the Duco White matching the bleached finish; in the case of 704 Line Dulux, 236-1011 Duco should be used for patching or panel refinishing on all new cabinets. For boxes which have been in service, a blend of 236-1011 and 236-1050 should be used to match the color of the finish.

It will be noted that the same Duco material, 236-1050, may be blended to match the cream tone of both 104 and 704 Dulux finishes.

This means that three Duco items: 236-1136, 236-1011, and 236-1050 should suffice for all patching or panel refinishing of Dulux finished refrigerators.

REFINISHING CABINETS

The second division of this subject, the complete refinishing of cabinets, can be disposed of very easily. Duco or air dry Dulux may be used for the complete refinishing of refrigerator cabinets. Any of the Duco enamels mentioned above may be used, although 236-1011 or 236-1136 will be preferred, of course, because of their whiter color.

If Dulux is used, we recommend 81-5765 air dry refrigerator white Dulux, which is a match for 236-1136 Duco. Another Dulux is available; namely, 81-5932 cream white, which is matched in color to aged baking Dulux. It is intended for tinting 81-5765 to secure intermediate shades.

We do not recommend the use of air dry Dulux for patching, although some operators prefer it for patching of 104 Line baking Dulux. Air dry Dulux must never be used on new 704 Line Dulux, because it is not white enough to match the 704 Dulux color.

You will find listed in the table below the manufacturers who use refrigerator baking Dulux, and the type of Dulux (104 Line or 704 Line) used by each.

DUCO FOR REFRIGERATORS

Duco is recommended for touching-up metal refrigerators and for finishing parts except the food compartment. For complete refinishing, refrigerator Dulux is recommended.

DIRECTIONS FOR USE

Stir thoroughly in order to incorporate the pigment with the vehicle.

Reduce Duco with 3614-G Duco thinner in the proportion of one gallon of former and 1½ gallons of latter. The surface must be dry and free from grease, oil, polish, etc.

HOW TO TOUCH-UP SPOTS

Sand spots thoroughly with No. 360 abrasive and oil-free naptha to remove rust, etc. Edges of the finish should be sanded down so that they cannot be felt. If metal is exposed, spray spots with 233-1088 white primer surfacer reduced with one and one-half volumes of Duco thinner to build them up to surrounding surface.

Any imperfections which the primer-surfacer has not filled should be knifed out with 288-5163 white pyroxylin glazing putty. If no putty is used the primer-surfacer should be allowed to dry about 30 minutes and sanded with No. 400 abrasive and water. If putty is used, it will be necessary to allow about 3 hours for drying before sanding with abrasive and water.

Spray two or more coats of Duco at about 30 lbs. pressure.

Allow patch to dry about 4 hours and rub out spray dust with No. 7 Duco polish.

HOW TO FINISH PARTS

If the parts have not been finished, sand with "Deoxidine" (American Chemical Paint Co., Ambler, Pa.), Metalprep (Neilson Chemical Co., Detroit), or other approved rust remover. Immediately spray one light, semi-transparent coat of 475-7316-R white metal primer and allow about 24 hours to dry and scuff primer lightly with No. 400 abrasive.

Spray two or more coats of Duco.

Allow to dry about 4 hours and rub with No. 7 Duco polish.

REFRIGERATOR DULUX

Refrigerator Dulux is recommended for the complete refinishing of metal refrigerators, except the food compartment. For touch-up, use du Pont Duco.

DIRECTIONS FOR USE

Stir thoroughly in order to incorporate the pigment uniformly with the vehicle.

Reduce refrigerator Dulux with about 10% of T-3812 automotive Dulux thinner.

The surface must be dry and free from grease, oil, polish, etc.

Refrigerator Dulux may be applied over the old finish, or the old finish may be removed.

HOW TO APPLY REFRIGERATOR DULUX OVER OLD FINISH

Sand thoroughly with No. 360 abrasive and oil-free naptha. Rust spots, where finish has been broken, should be rubbed bright, and edges of finish should be sanded down so that they cannot be felt. Spray damaged spots with refrigerator Dulux to build them up to surrounding surface. Allow 24 hours to dry.

No primer or surfacer is necessary.

Spray two or more light coats of refrigerator Dulux at 50 to 80 lbs. pressure, allowing 24 hours between coats. A heavy film results in slow drying and sub-standard hardness.

HOW TO REMOVE OLD FINISH & APPLY REFRIGERATOR DULUX

Strip off old finish with VA-916 du Pont super Removo and wash carefully with Duco thinner to remove wax. Sand metal with "Deoxidine" (American Chemical Paint Co., Ambler, Pa.), or "Metalprep" (Neilson Chemical Co., Detroit) or other approved rust remover.

No primer or surfacer is necessary.

Spray three or more coats of refrigerator Dulux at 50 to 80 lbs. pressure, with 24 hours between coats.

Do not add anything to refrigerator Dulux except T-3812 automotive Dulux thinner.

Clean spraying equipment with Duco thinner.

Refrigerators Finished With Baking Dulux

Brand	Manufactured by	Type Finish (Line)
Apex	Apex Electrical Mfg. Co.	104
Bohn	Bohn Refrigerator Co.	704
Coldspot	Sears, Roebuck & Co.	704 & 104
Conservador	Philco Refrigerator Co.	104
Copeland	Copeland Refrigeration Corp.	704 & 104
Econom-Icer	Ranney Refrigerator	104
Frigidaire	Frigidaire Div. General Motors Corp.	704
Gale	Gale Products Div. of Outboard Marine & Mfg. Co.	704
General Electric	General Electric Co.	104
Gibson	Gibson Electric Refrigerator Corp.	704
Heinz & Munschauer	Heinz & Munschauer	104
Hotpoint	Edison General Electric Appliance Co., Inc.	104
Ice-O-Matic	Williams Oil-O-Matic Heating Corp.	704
Jewett	Jewett Refrigerator Co.	104
Johnson	Johnson Motors	704
Marshall Wells	Marshall Wells	104
Mayflower	Mayflower-Lewis Corp.	704
Norge	Norge Div. Borg-Warner Corp.	104
O'Keefe & Merritt	O'Keefe & Merritt Co.	704
Otis Horne	Otis Horne	104
Shelvador	Crosley Corp.	704
Sparton	Sparks-Withington Co.	104
Speed Queen	Barlow & Seeling Mfg. Co.	704
Stewart-Warner	Stewart-Warner Corp.	104
Super-Macy	R. H. Macy Co.	704
Trukold	Montgomery Ward Co.	704 & 104
Universal	Landers, Frary & Clark	704 & 104
Ward	Ward Refrigerator Co.	704
Westinghouse	Westinghouse Electric & Mfg. Co.	704

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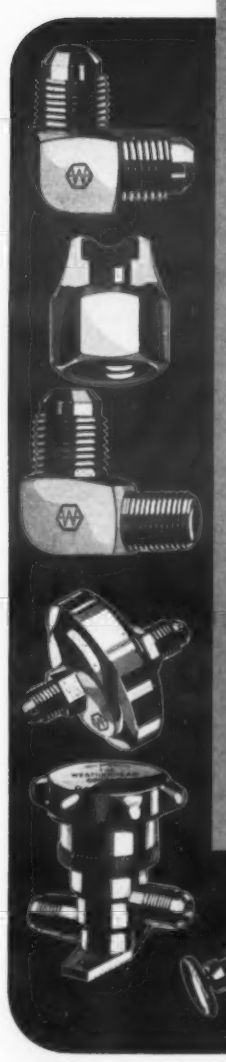

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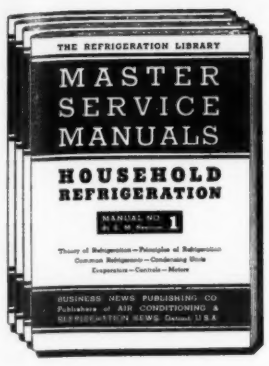
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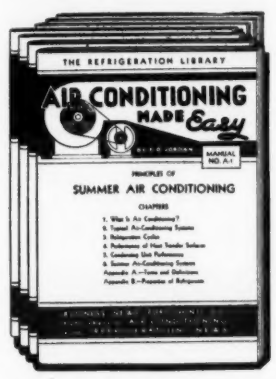

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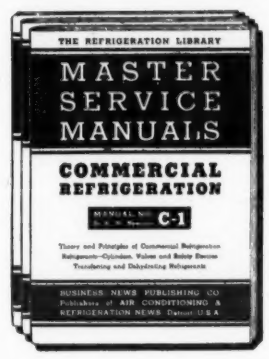
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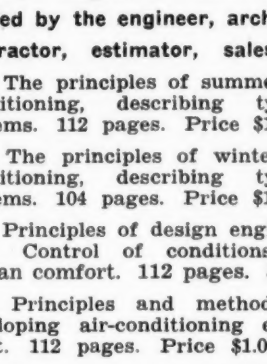
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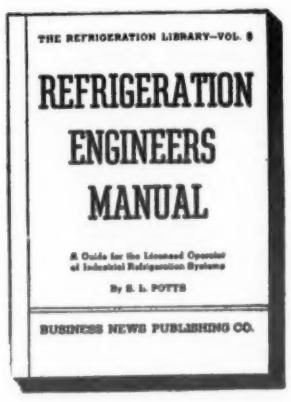
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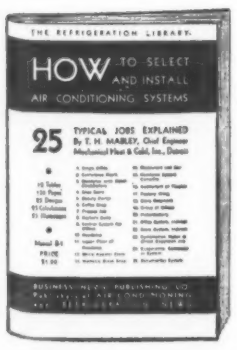
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Locker Storages

Wis. Locker Operators Gird For Action As State Association Is Formed

BEAVER DAM, Wis.—Formation of a state-wide association of refrigerated locker plant operators was effected recently when from 50 to 75 operators of both limited and complete service plants met for this purpose at Hotel Rogers here.

Spence Vieth of Ripon acted as chairman of the meeting. Introductory remarks were made by Mr. Vieth, Alfred Cory of Ft. Atkinson, and Prof. Marvin A. Schaars of the College of Agriculture, University of Wisconsin.

Mr. Cory acted as temporary secretary and read the proposed articles of organization. Then the chairman presented each article for consideration by the group. Spirited discussion followed the reading of articles which contained controversial matters, and as a result of this discussion a number of changes were made in the proposed articles.

General purpose of the state locker association, as set forth in the articles of organization, follows:

AIMS AND OBJECTIVES

"The object of this association shall be: to unite the influence and endeavors of all Wisconsin frozen food locker plant owners, operators, and those interested in the advancement of these plants; to promote better and more complete service for locker renters; to increase through education and publicity the number of people realizing the benefit to be derived from the use of lockers for frozen foods; to aid owners and operators in making operation of plants financially profitable; to promote the public welfare through the sanitary processing and storage of food products; to arrange for collective purchase of merchandise, supplies, and equipment; and to cooperate with public agencies for the passage of effective legislation and ordinances that will promote the efficient and sanitary operation of plants."

After the discussions, incorporation papers were drawn up and by-laws were adopted. Official name decided upon was Wisconsin Frozen Food Locker Association.

Three classes of members were provided for: regular active members, including any firm or corporation owning and operating one or more refrigerated locker plants where food is prepared and/or stored; associate members, consisting of any individual, company, or firm engaged in manufacturing or selling of machinery, supplies, or merchandise to locker plants; honorary members, consisting of such persons as have rendered valuable or exceptional services to the refrigerated locker industry.

Dues for regular members were placed at a minimum of $5 annually, plus 5 cents for each locker over 100 in the member's plant. Associate members' dues were set at $25 for manufacturers and state distributors, and $10 for local agencies and local distributors No dues are to be required of honorary members.

FIVE DIRECTORS NAMED

Five members were elected to act as incorporators of the new association and to serve as the group's first directors. These directors are: Spence Vieth, Ripon; J. C. Palmer, Waukesha; Alfred Cory, Ft. Atkinson; Henry Ringling, Baraboo; and Arnin Hernke, Chilton.

At the first directors' meeting, Mr. Vieth was elected president, Mr. Palmer vice president, and Mr. Cory secretary-treasurer.

Directors are to receive no compensation for attending regular meetings of the board, but are to receive $5 per day for attending any special meetings which may be called.

Several committees are to be appointed by the board to carry out the objectives of the association in conjunction with the officers and directors. A committee on rules and regulations pertaining to locker plants, a legislative committee which will investigate legislation relative to the functioning of such plants, and a membership committee have been tentatively proposed.

GROUP PURCHASING PLANNED

The association also is expected to make some move toward the collective purchasing of supplies, such as wrapping paper, etc., in order to enable members to obtain better prices on materials purchased for use in their plants. Such action, however, may not be instigated at the present time.

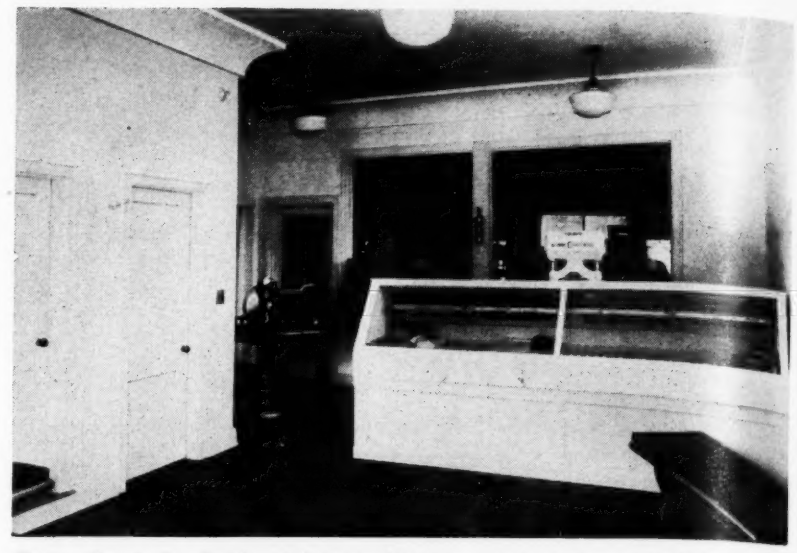
Annual meetings of the association are to be held in May of each year, with the first one scheduled for the first week in May, 1940 at Madison. This meeting will coincide with the second educational conference for locker operators which will be held at that time at the College of Agriculture of the University of Wisconsin.

Carolina Company Plans Locker Plant Chain

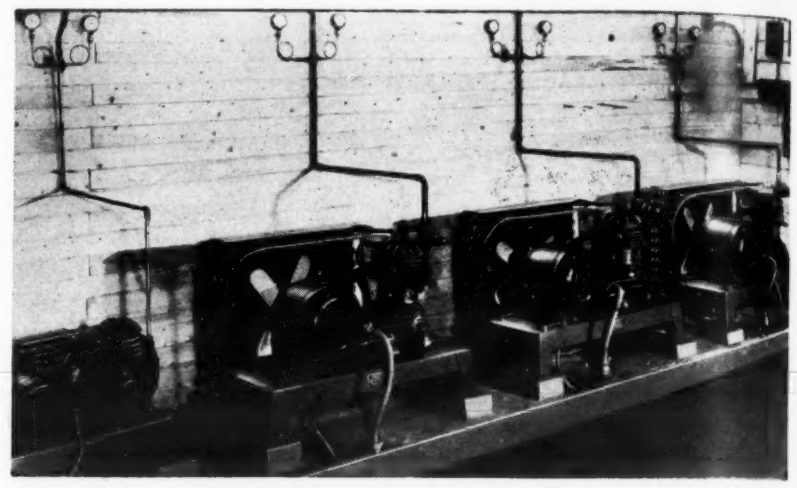
RALEIGH, N. C.—Carolina Freezers, Inc., has been organized here with authorized capital of $100,000 to build, buy, own, and operate cold storage locker plants.

Russell G. Broadus, Earl H. Meacham, and Mrs. Montrose Hull Meacham, all of Raleigh, have subscribed $3,000 stock.

Glass-Enclosed Processing Room & Multiple-Unit Refrigerating System Feature First Locker Plant In the Province of Alberta



From front to back—entrance lounge, meat sales department with refrigerated display case, and (behind glass partitions) meat cutting room.



These Baker condensing units supply the plant with refrigeration.

* * *

STRATHMORE, Alberta, Canada—Complete in every detail and equipped to carry on all activities of the food freezing and cold storage industry is the plant established here by C. L. Dowsley, president of Western Canada Refrigeration, Inc. and Electrical Products, Ltd., distributor in this territory for Baker Ice Machine Co., Inc. of Omaha, Neb.

This plant, said to be the first of its kind in the province of Alberta, was established by Mr. Dowsley after he had inspected several locker plants in the United States.

Deciding upon Strathmore as a suitable location, Mr. Dowsley bought two store buildings situated on a prominent corner, adjacent to the town's only theater, and began the remodeling and reconstruction work which was to convert them into a modern and fully equipped refrigerated locker plant.

First floor of this plant houses a 350-unit locker room, a quick freezer, coolers for pre-chilling, aging, and bulk meat storage, a processing room, retail meat store, rest room, and—as a special feature—shower baths for patrons.

In the basement are located the pickling, butter, egg, and smoked meat coolers, and the storage freezer.

Slaughtering is done at a fully equipped plant located about a mile away. Here also are corrals, feed pens, and offal disposal.

Main entrance of the plant opens into a fully appointed lounge, beyond which is the meat sales department with its refrigerated display case and its all-white trim. The cutting room is separated from the sales department by plate glass partitions, so that all handling of the meat can take place under the most sanitary conditions.

Refrigeration equipment is of the multiple-unit type, each room in the plant being controlled separately through individual thermostats.

The freezer room is equipped with shelf-type quick-freezing plates with booster plates installed overhead. This arrangement maintains a temperature of —20° F. Locker room is held at 5° F. by a "Freeze-E-Fex" suspended-type unit equipped with an automatic electrical defrosting device. Higher temperature coolers are refrigerated by suspended-type "Fan-E-Fex" deluxe units.

Thermal expansion valves, separate heat exchangers, suction pressure regulators, manifolded stop valves, high and low pressure controls, and copper tubing with streamlined soldered fittings are all a part of the refrigeration system.

Heart of the system is a battery of Baker air-cooled "Freon-12" model AF200L condensing units. The display case is refrigerated by a Baker model AF33 "Freon" air-cooled unit operating under pressure control.

One of the plant's better customers is the Canadian Pacific Railway, which has engaged much refrigerated space for storage of meats, butter, eggs, and fresh vegetables. The C.P.R. maintains a divisional commissary here for its dining car and hotel system.

Encouraged by the response received by his Strathmore plant, Mr. Dowsley now has in various stages of development a number of similar plants to be erected in strategic locations throughout the province.

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Booth 108
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Exposition
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VIRGINIA SMELTING COMPANY
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Give 17 times longer life
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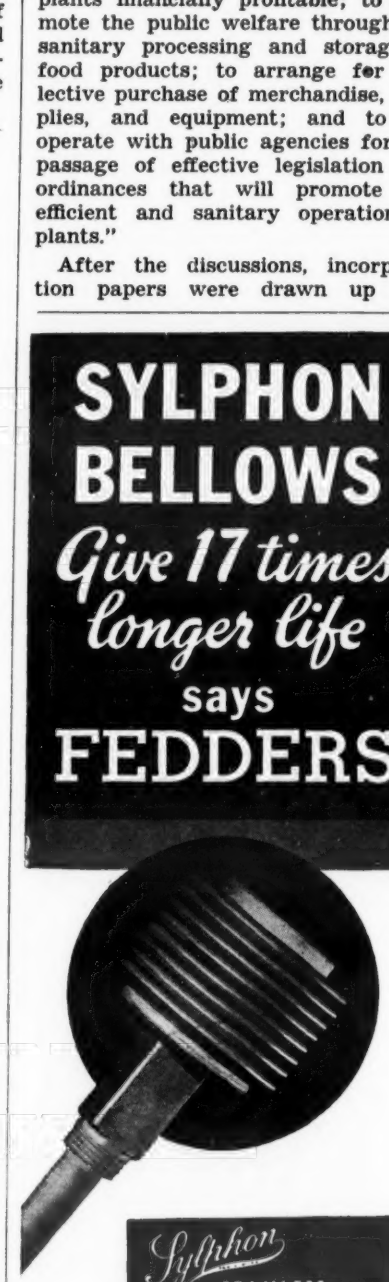

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Combining the durability of metal with the flexibility of less substantial materials, Sylphon Bellows contribute much to the well-known dependability and long life of Fedders Thermostatic Valves. *Actual tests made in this company's laboratory show Sylphon Bellows have 17 times longer life than ordinary diaphragms.*

Sylphons are used in Fedders valves for both thermostatic power elements and packless glands. They insure sensitive, positive control action; are rugged, permanent seal, against leakage.

Profit by the experience of the leaders in the refrigeration industry. Give your products the "Life Insurance" of Sylphon Bellows. Replace short-lived diaphragms, troublesome packed joints, etc., with this seamless, jointless, time-tested "Miracle in Metal." Write for Bulletin VO-511.

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ENGINEERED REFRIGERANT CONTROLS — ALCO — FOR HIGHEST EVAPORATOR EFFICIENCY

Treatment of 'Flood Back' on Systems Using Thermo Valves

3. Cause Is Faulty Evaporator Design (Concl.)

By J. E. Dube and F. M. MacDougall, Alco Valve Co.

Editor's Note: This is the last of a series of articles describing the causes of "flood back" of refrigerant to the compressor, and outlining means of prevention. Causes discussed were "poorly engineered control equipment," "faulty application and inadequate use of controls," and "faulty evaporator design," which is concluded in this instalment.

A source of trouble common to all types of coils is a trap for liquid refrigerant between the coil outlet and the thermo valve remote bulb. A continuous drain should be provided between these points, care being taken to arrange the outlet from the suction header so that no portion of the header is trapped, as discussed previously and illustrated in Fig. 4 (see Oct. 18 issue).

In addition to being conducive to the highest type of control stability, it prevents oil stagnation. This continuous drain usually is carried all the way to the compressor suction, but sometimes this is neither desirable nor convenient.

For example, an evaporator is installed only a few feet above the floor, and it is necessary that the lines be run near the ceiling to the remote compressor. A trap in the line is unavoidable.

Also, a trap sometimes is introduced deliberately in the suction to prevent flood back to the compressor when the system is not operating (this precaution is unnecessary on systems provided with liquid stop valves operating automatically with the compressor as previously described).

SHOULD CAUSE NO TROUBLE

Such traps should cause no trouble if the trapped portion is below the thermo valve remote bulb and if the line is small enough to maintain a fairly high velocity to expedite the oil return. The latter point is relatively unimportant because suction lines unfortunately are more likely to be too small than too large.

The recommended trap arrangement and remote bulb location are shown in Fig. 7. It is evident that an accumulation of liquid beyond the remote bulb will have no effect on the control. After draining away promptly from the remote bulb, it is evaporated gradually by the superheated gas during operation of the system and returned to the compressor.

"Flood back" from all types of coils also may result from an attempt to compensate for some fault by changing the adjustment of the thermo valve. The superheat setting may be decreased to the minimum in an effort to reduce a very high superheat caused by a valve of inadequate capacity, the lack of an external equalizer on a coil with a high pressure drop, flash gas at the valve inlet, or other causes entirely apart from the valve characteristics.

However, in such instances the superheat frequently drops very low, even to zero, on light loads and the control will be less stable. A less obvious cause of an otherwise unexplainable high superheat is flash gas in the liquid lines to thermo valves connected in parallel, as shown in Fig. 6 (see Oct. 18 issue).

DISTRIBUTION UNPREDICTABLE

Because the tendency of the gas to flow to the upper valve (for example) varies with the load, the distribution of liquid refrigerant to the valves is unpredictable. If the liquid is subcooled sufficiently to counteract the effect of the increase in elevation between the receiver and the valves, and if the liquid line is of adequate size, there should be no flash gas and each thermo valve should receive sufficient refrigerant.

However, when flash gas is present, the liquid is carried by its greater inertia beyond the branch leading to the lower valve, with the result that the upper valve gets solid liquid and the lower valve gets all of the flash gas. If, on the other hand, the liquid line velocity is low, the liquid may tend to flow to the lower valve, and the upper valve will receive the flash gas.

This tendency varies with the load because of the change in the line velocity, and it explains why many jobs have the lower valve starved at one period and the upper valve starved at another. One or the other of the coils will have a high superheat which, of course, cannot be corrected entirely by changing the valve adjustment.

ANOTHER SOLUTION

If subcooling is impracticable, the condition may be improved by sizing the branch liquid lines in accordance with the respective loads, making the branch line velocities equal to or slightly greater than the main line velocity.

Thermo valves are being applied extensively to shell-and-tube coolers, which may be divided into two groups: coolers with the refrigerant in the shell and coolers with the refrigerant in the tubes. Coolers of the former type should be equipped with separators because there is no definite path for the refrigerant to follow inside the cooler. Fig. 8 shows the proper arrangement, including an external superheater. A high liquid level is permitted with safety, which obviously affords the maximum cooler capacity and improves the oil return. Inasmuch as the liquid level in the cooler is determined by the amount of the tube surface used for superheating, the level depends upon the amount of surface in the external superheater.

The superheater should be large enough to do all of the superheating so that the cooler surface will be used exclusively for latent-heat transfer, with the separator returning to the cooler the liquid carry-over from the cooler.

Coolers with the refrigerant in the tubes may be considered from a control standpoint as multi-circuit coils. They are subject to the same refrigerant distribution and slugging problems as finned coils, exaggerated by the relatively short circuit lengths required for the higher unit linear loading. The superheater and separator are not required, except where it is desired to increase the cooler capacity by using all of the cooler surface for latent-heat transfer.

In closing we would like to emphasize that with reasonably well designed evaporators "flood back" can successfully be avoided by the correct application of properly engineered controls.

Thief Poses as Refrigerator Inspector To Gain Entrance To Home

BERKLEY, Mich.—A thief, posing as a refrigerator inspector to gain admission to her home, struck 22-year-old Mrs. Rudolph Collins over the head, tied her to a chair, and ransacked the house here recently. The fake "inspector" walked off with $25.

Mrs. Collins protested that there was nothing the matter with her refrigerator when the man sought to gain admittance on this ruse. He then slugged her over the head, bound her, and searched the house while she watched.

The intruder was described as "about 19 years old, 5 feet 6 inches tall, and weighing 135 pounds."

Study Need For Lockers In Texas Village

POST, Tex.—A five-member subcommittee has been appointed here by the Garza Land Use Committee to make a survey of the needs for cold storage locker systems here.

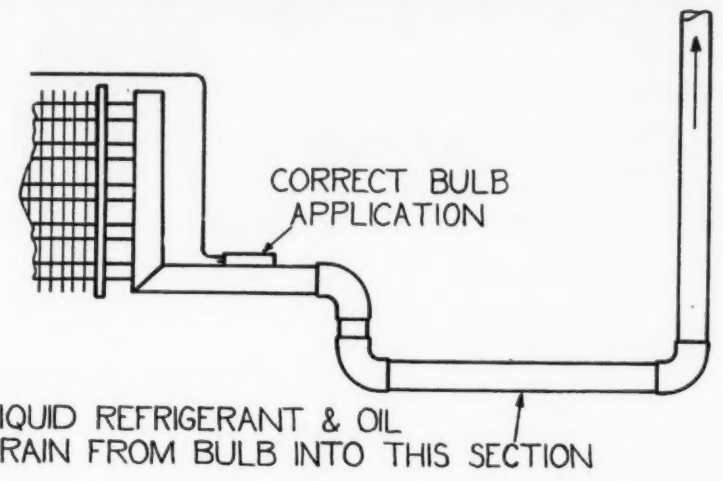
Manufacturers Putting Plants In Texas

AUSTIN, Tex.—Increasing demands for air-conditioning equipment has resulted in the establishment of numerous new manufacturing plants in Texas. This group of plants includes manufacturers of refrigeration supplies, heating and ventilating systems, and attic fans.

To the 38 plants already established prior to 1939, following are some of those added this year:

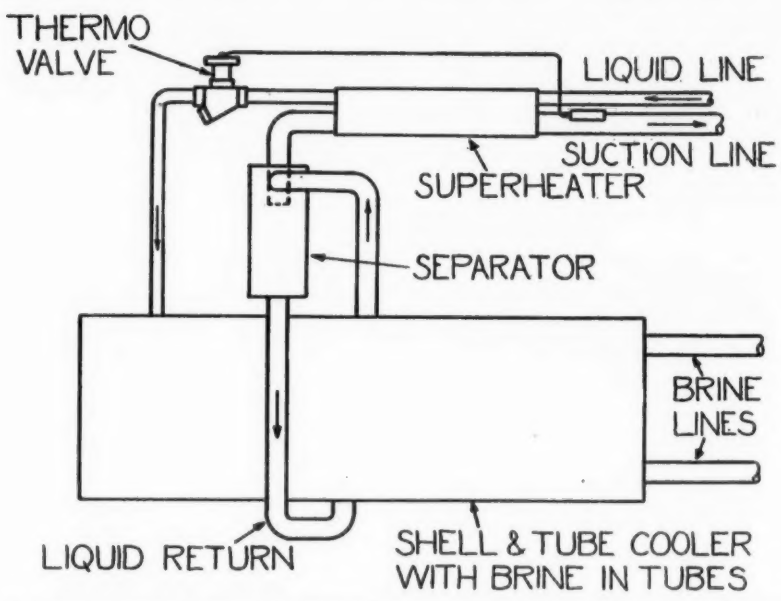
Velvet Air Mfg. Co., Clipper Mfg. Co., J. W. Harrington Co., and Minimax Mfg. Co., all of Houston; Gar-Airco Engineering Co., Universal Mfg. Co., and Peerless of America, Inc., of Dallas; and Panhandle Supply Co., Lubbock.

Fig. 7—Trap Arrangement & Bulb Location



When traps are introduced deliberately to prevent flood backs, the above arrangement and bulb location are recommended.

Fig. 8—Installation of External Superheater



If a superheater is used the arrangement shown above should be followed.

Cuban Distributor Visits York Plant To Confer

YORK, Pa.—W. Alonso of Havana, Cuba, recently visited York Ice Machinery Corp. headquarters here to discuss plans for distribution of York air conditioning and refrigeration equipment in that country.

Mr. Alonso represents the firm of Alonso y Canellas, which recently has been given exclusive rights to sell York conditioning and refrigeration products in Cuba.

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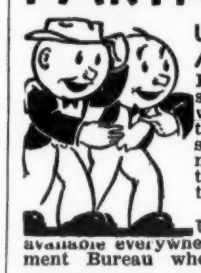

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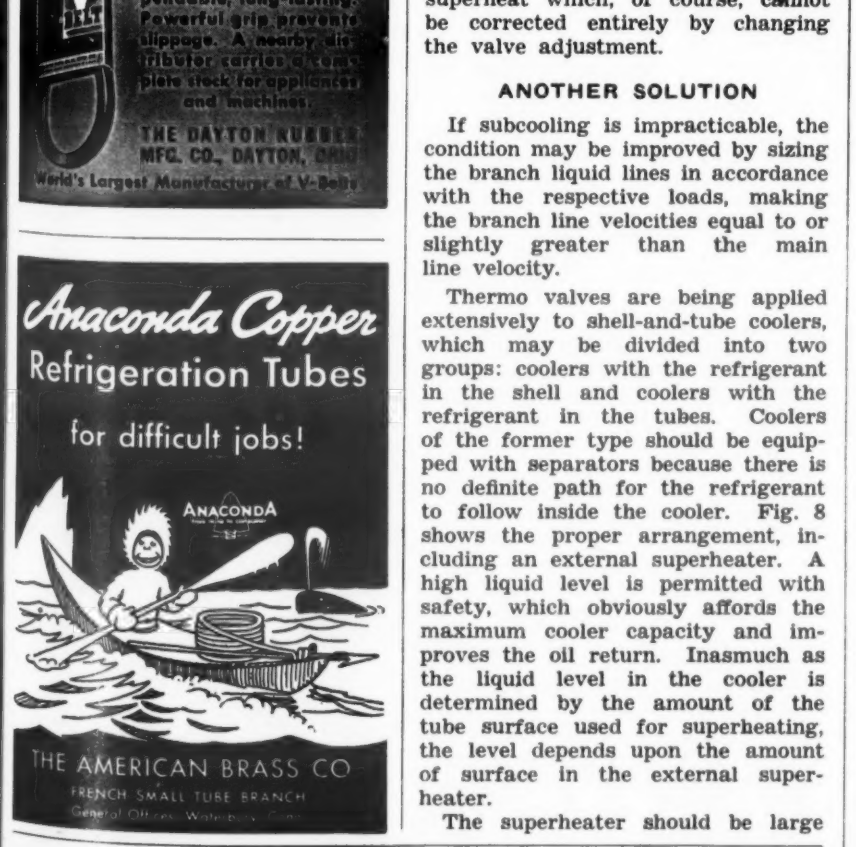
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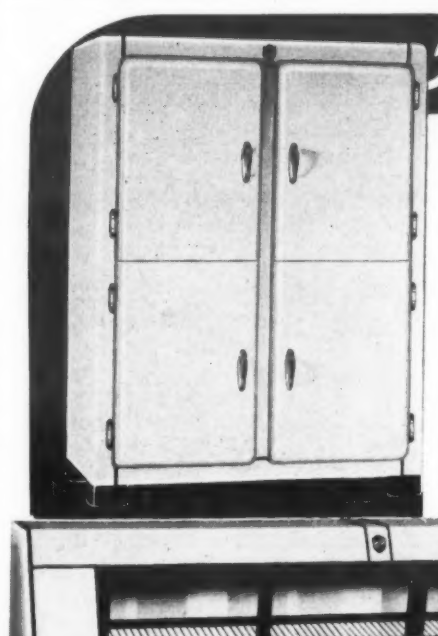

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You'll Find Business BETTER When You Sell This EXTRA Value

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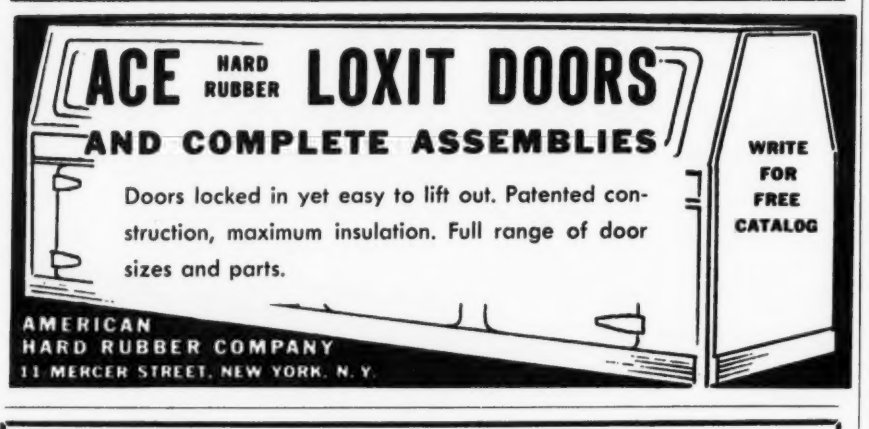
THE BUYER'S GUIDE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SANDERS BUTCHER SUPPLY CO.

2755 W. Fort St., Detroit, Mich.

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For purging, charging and testing the following units:

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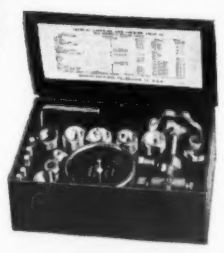
Cold Spot (to 1934)	General Electric	Servel	Westinghouse (Small Float)
Cold Spot (1935 and later)	General Electric (CG-1-A16)	Sparton	

Kit consists of:
1 Valve, with wheel handle, 10 valve adapters, 6 wrenches, packed in steel box.
Also furnished with 2½" or 3" compound retard gauge.
Wheel handle and gauge need not be removed when outfit is placed in box.
THE IMPERIAL BRASS MFG. CO., 565 S. Racine Ave., Chicago



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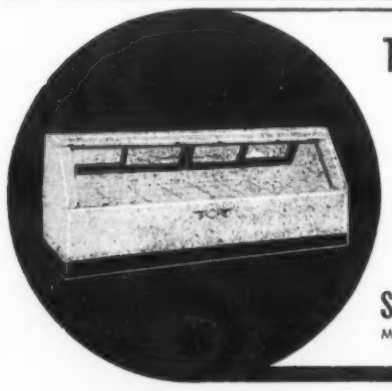


THE PROFIT LINE FOR '39

Refrigerator and Compressor sales go together. SHERER offers a complete line of cases, coolers and boxes to be sold with your compressors.

Write for catalog and franchise details, mentioning territory desired.

SHERER-GILLETT CO., Marshall, Mich.

Manufacturers of Refrigerated Display and Storage Equipment

New Products

Gasket Marker

Gasket Marking Easier With New Tool

CHICAGO—A handy new tool for marking and outlining gasket sizes on sheet packings has been brought out by Crane Packing Co. here.

Consisting simply of a flat piece of celluloid shaped like an elongated triangle and lined with hole-punched linear scales, this gasket marker is said to eliminate the necessity of using dividers, of referring to gasket tables, or of taking more than one measurement.

The company claims that it offers a quick and convenient method for marking gaskets for extra heavy, medium standard, and low pressure flanges, both ring and full-face types.

Complete instructions for use are printed right on the marker.

Thermo Cuber Co. Catalog Stresses Safety Feature

CHICAGO—Just issued by Thermo Cuber Co. here is an eight-page illustrated folder listing available models and prices of the device, which cubes ice with hot water or steam.

Safety feature of the equipment is stressed, since there are no saws or moving parts and the machine can be run by even an inexperienced operator without danger, according to the booklet. Economy, speed, and simplicity of installation are other features stressed

Design and operation of the cuber are explained in some detail, and models with capacities from 3,600 to 33,000 cubes per hour are shown with their specifications and list prices. The units described range in price from $395 to $995. Auxiliary cutter and water heater also are listed. These items are available at extra cost.

Thermometers, Pressure Gauges Described In Brown Catalog

PHILADELPHIA—Brown Instrument Co., a division of Minneapolis-Honeywell Regulator Co., has just issued a colorful eight-page bulletin announcing its new line of thermometers and pressure gauges.

Vapor-actuated, gas-actuated, and mercury-actuated thermometers are fully described. Both the indicating type and the one, two, and three-pen recording models are illustrated.

The rectangular die-cast aluminum cases of these instruments were designed by Henry W. Dreyfuss, the industrial stylist who designed the streamlined Twentieth Century Limited.

Copies of this new bulletin (No. 2-17) may be obtained by writing to the manufacturer.

South Bend Lathe Catalog Lists 75 Models

SOUTH BEND, Ind.—Just issued by South Bend Lathe Works is a 112-page catalog, illustrating and describing more than 75 different sizes and types of lathes for production manufacturing, tool room, and general shop work.

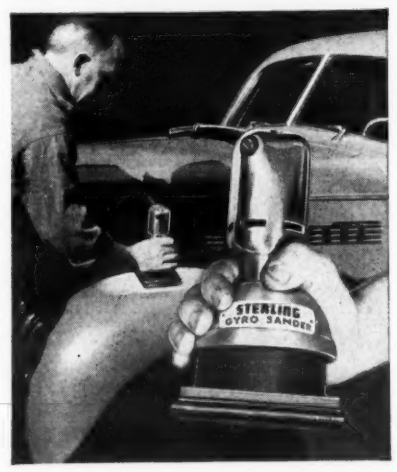
Hand-Size Sander Has Self-Contained Motor

DETROIT—Sterling Products Co. has announced a portable electric sander as a companion product to its air-driven "Speed-Bloc" unit.

New sander has a self-contained, gear-driven electric motor and can be plugged into any socket. Flexible sanding pad operates in a movement closely resembling hand sanding. Abrasive paper is attached to the sanding pad, and held in place by a special holder.

The sander also may be used for rubbing and polishing, in which case cloths may be attached in the same manner as paper. The unit is said to weigh but 3½ lbs., and so can be operated with one hand. Regular Sterling Products organization will handle merchandising of the new device.

Portable Sander



Two Washer Models Added To Borg-Warner Line

DETROIT—Two new "White Star" electric washers have been announced by the Detroit Vapor Stove division of Borg-Warner Corp. Both units are finished in baked white enamel, and have precision-built transmissions and sealed ¼-hp. motors.

Larger model, D-20, has a capacity of 8 lbs. of dry garments per load, or 50 lbs. per hour. Tub capacity of the model is 17.5 gallons when filled to the marked water line. Bar release wringer with lever reset is used on the model; tub is of the semi-bottleneck type, with quick action drain. Agitator is of cast aluminum, of the large high vane type.

D-10, the smaller model, has the same general features as the D-20. It will handle 6 lbs. of dry garment per load, and the tub has a 14-gallon capacity. Agitator is of the low vane type.

Both models also are available equipped with electric motor driven water pumps at extra cost.

Refrigerator Car Fumigant Developed By Dow

MIDLAND, Mich.—For fumigating refrigerator cars, warehouses, and similar large buildings, Dow Chemical Co. has developed a new fumigant, known as methyl bromide, which is claimed to have a high toxicity to insect life at all stages of development, and a low coefficient of absorption by most materials.

Underwriters' Laboratories lists methyl bromide as "nonflammable over a wide range of concentrations extending far beyond those used in practice. Flame propagation within a narrow range of 1% (13.5 to 14.5% by volume) in the presence of an intense source of ignition is recorded in the technical literature. Fire hazard is very small from a practical standpoint."

Fumigation with the chemical may be carried on either in a vacuum in specially built steel chambers, or at atmospheric pressure in tight vaults, warehouses, railroad cars, or under rubberized canvas. Vacuum fumigation is used when time is short, and in cases where adequate penetration cannot be obtained under atmospheric conditions.

New Ventilator Allows Mixture of Air

CANTON, Ohio — A number of improvements have been made in the 1940 model of the Silentaire window ventilator, according to claims made by the Berger Mfg. Corp.

Capacity of the new window ventilator has been increased to 650 c.f.m., and outlet velocity raised to the equivalent of a 20-mile wind, it is claimed.

A new controllable mixing damper permits blending of room air and outside air in the desired proportions. The filter is said to remove 97% of dirt, dust, and pollen from the air.

The mechanism is silent in operation, and the inside of the cabinet is treated with a special sound-absorbing material which tends to eliminate outside noises.

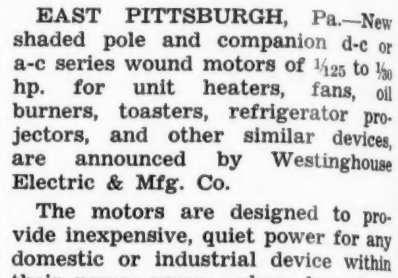
Standard model Silentaire is equipped with a tell-tale light, which indicates when the machine is in operation. Finish is opalescent fawn tan.

New Midget Motor Models Announced By Westinghouse

EAST PITTSBURGH, Pa.—New shaded pole and companion d-c or a-c series wound motors of 1/125 to 1/30 hp. for unit heaters, fans, oil burners, toasters, refrigerator projectors, and other similar devices, are announced by Westinghouse Electric & Mfg. Co.

The motors are designed to provide inexpensive, quiet power for any domestic or industrial device within their power range, where low starting torque and high dependability are required. Rotor and shaft are the only moving parts. Speed reductions up to 50% of load speed are usually obtained on fan, unit heater, and blower applications. Controllers for these motors give one, two, or three speeds.

Bearings are self-aligning, of porous bronze and of long life design. "No-bump" design similar to that of larger Westinghouse motors eliminates noise caused by thrust on motor shaft by driven load.



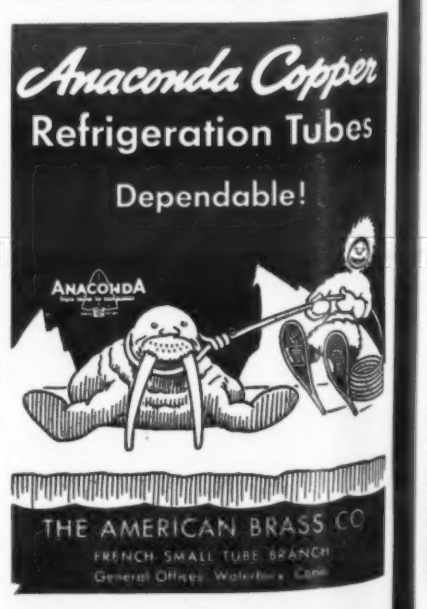
For Information on Motors FOR ALL TYPES OF Air Conditioning and Refrigeration Equipment WRITE TO

Wagner Electric Corporation

6441 PLYMOUTH AVE ST. LOUIS, MO

A Dehydrator that is really Dry. Mueller Brass Co. Dri-Drier.

MUELLER BRASS CO. Port Huron, Mich.



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RATES: Fifty words or less in 6-point light-face type only, one insertion, $2.00, additional words, four cents each. Three consecutive insertions $5.00, additional words ten cents each.

PAYMENT in advance is required for advertising in this column.

REPLIES to advertisements with Box No. should be addressed to Air Conditioning & Refrigeration News, 5229 Cass Ave., Detroit, Mich.

SALESMEN WANTED

DEALER DESIRES commercial refrigeration salesman, car necessary, experience required, drawing account, car expenses, liberal commissions, write qualifications. WILLIAM B. STOCK, Frigidaire Sales & Service, 201 S. George St., York, Pa.

FRANCHISES AVAILABLE

COMPLETE COMMERCIAL Refrigerator line. Porcelain corkboard display cases, reach-in, walk-in and sliding door, full vision fruit and vegetable refrigerators. Originators of open top refrigerated vegetable cases. Full line extra-liberally coiled. Percival-Universal units. Established 1886. 53 years of service. C. L. PERCIVAL COMPANY, Des Moines, Iowa.

SEND FOR PRICES and literature on the General 1940, all streamlined refrigerator display case. Over 40 years' experience manufacturing good commercial display cases. On a comparative price test with other makes of equal specifications, prices are lowest in the country. GENERAL REFRIGERATOR & STORE FIXTURE CO., 519 Bainbridge St., Philadelphia, Pa.

COMMERCIAL LINE refrigerator display cases, walk-in coolers, and refrigerators; also direct draw mechanically cooled beer coolers. Sell with Ehrlich Compressors or with any other make. Attractive discounts also financing arrangements to help sell. 70 years in business. Write for full information. EHRLICH REFRIGERATOR MFG. CO., St. Joseph, Mo.

EQUIPMENT FOR SALE

MANUFACTURER of "Freon," window type room air conditioning units wishes to dispose of a limited quantity of brand new 1939 models, AC, 60 cycle, 110 volts; ⅓ H.P. size, list price $129.00, less 50%; ½ H.P. size, list price $229.00, less 50%; larger discounts on quantity orders. Write Box No. 1187, Air Conditioning & Refrigeration News.

REPLACEMENT CONTROLS and relays for all standard model Frigidaires. Controls $4.00 each—Relays $2.50 each. Also three-tray flooded Frigidaire coils $2.50 each. "As is" Grunow refrigerators in all sizes. Write for further information. ASSOCIATED REFRIGERATOR PLANT, INC., 3028 Hunting Park Ave., Philadelphia, Pa.

BRAND NEW complete high sides; ⅛, ¼, ½ h.p. General Electric compressors with General Electric motors; Frigidaire compressors with Delco motors. Low prices, money back guarantee. MARTIN SPECTOR, 520 East 20th Street, New York City.

REPAIR SERVICE

DOMESTIC TYPE thermostatic controls reconditioned like new. Precision work by experts. Years of satisfied customers, among largest in the country. All work guaranteed. Try us and be convinced. The largest thermostatic repair service in the country. It's your guarantee. Prices on request. UNITED REPAIR CO., INC., 342 W. 70th St., New York City.

GENERAL ELECTRIC DR1 and DR2 Monitor Top units exchanged, $30.00 F.O.B. our factory. Send your defective unit. On receipt, we make immediate shipment of completely rebuilt, refinished unit with one year unconditional guarantee. Like new in every respect. Westinghouse and Servel hermetic units rebuilt and guaranteed. REFRIGERATION MAINTENANCE CORPORATION, 321-27 East Grand Avenue, Chicago, Ill.

PATENTS

HAVE YOUR patent work done by a specialist. I have had more than 25 years' experience in refrigeration engineering. Prompt searches and reports. Reasonable fees. H. R. VAN DEVENTER (ASRE), Patent Attorney, 342 Madison Avenue, New York City.

ACME INDUSTRIES, INC.
JACKSON MICHIGAN
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FREON CONDENSERS

STOP LEAKS AND NOISE
on old shafts as well as new with
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SHAFT SEALS
Order from your jobber
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140 Lexington Ave., Homer City, Pa.

BUNDY TUBING
Copper-Brazed Steel. Copper Coated Inside and Out. Sizes: ⅛" to ⅝" O.D.
BUNDY TUBING CO., DETROIT

'Overseas' Talk Over a Compressor

Two refrigeration men in a heated discussion. "Jerry" Jernberg (left), sales manager of commercial refrigeration at Mills Novelty Co., Chicago, and R. H. Ells, Mills distributor in Durban, South Africa, a recent visitor to the Mills factory.

Redesigned 'Precipitron' Air Cleaner Said To Pass Special 'Blackness Test'

DETROIT—Introduction of a redesigned and improved "Precipitron" electrostatic air cleaner for commercial and industrial use is being made by George F. Begoon of the Westinghouse Electric & Mfg. Co. at a series of meetings for engineers, architects, and members of the company's field organization.

Two sizes of cells have been adopted as standard: a cell having an effective cross-section 8 inches wide by 18 inches long, with a cleaning capacity of 375 c.f.m.; and an 8 x 36-inch cell with a capacity twice as great. From these two standard units, an air-cleaning system for any given physical layout may be constructed.

Power packs are available for any size installation, consisting of a high-reactance transformer, rectifier tubes, a capacitor, an indicating system, and a cabinet to house the parts. Both types operate on 115-volt, single-phase a-c lines.

By the "Blackness test," as used by the National Bureau of Standards, the larger cell has a guaranteed efficiency of 90% at 600 c.f.m. and 80% at 750 c.f.m.; the smaller cell is 90% efficient at 300 c.f.m. or 85% at 375 c.f.m.

According to Mr. Begoon, the electrostatic system of air cleaning is designed to remove small particles of dust, including those under one micron in size. Mr. Begoon objects to the common method, or "standard dust" test ordinarily used for air filters on the grounds that there is no such thing as "standard" dust. Common practice has been to introduce a given amount of this "standard dust" into the air stream, and then measure, by weight, the amount of dust accumulated by the filter.

Westinghouse engineers assert that this is not a true measure of dust removal, because the smaller particles in the air, while low in weight, are still relatively high in number. For this reason the "blackness test" for air filters is recommended.

In this test a sheet of clean paper is placed in the air stream and air is blown against it by means of a fan, for a given number of minutes. After this length of time the target is removed, a filter is placed between the fan and the target, and the air stream is permitted to blow against a new, clean target. The length of time which the fan must run to produce an equal degree of "blackness" on the second target, while passing through the filter under test, determines the efficiency of the filter.

Thus, if target No. 1 is used for five minutes with no filter, and if it takes 20 minutes to attain the same degree of blackness on target No. 2 when the filter is in place, the filter is said to be 75% efficient.

Mr. Begoon reports that while electrostatic air cleaners were originally dependent upon mechanical adhesion to hold dust on the charged plates, the Westinghouse units now use a special oil, which has been approved by the Underwriters Laboratories for this use. The plates are cleaned each month and require re-coating with oil about once in six months.

Sale of the Precipitron cells and their attendant equipment will be handled by a special division of the Westinghouse organization and marketed on much the same basis as motors. In other words, any firm engaged in the air-conditioning business can purchase the air-filtering units from the Westinghouse organization.

Promotion and advertising plans for the new equipment were announced by Donald Jenkins of the Westinghouse organization. Lester Foley, formerly associated with Carrier Corp. and Avery Engineering Co., will handle the Precipitron in this area, with headquarters in Pittsburgh.

Yazoo, Miss. Dealership Celebrates Anniversary

YAZOO CITY, Miss. — Electric Service Co. held a cooking school here to celebrate its third anniversary. It was in charge of Mrs. Eloise Taylor, Mississippi Power & Light Co. home service advisor.

New Philco Dealer Named

MAXTON, N. C.—Hampton Supply Co. has been appointed local dealer of Philco refrigerators and radios and Marion ranges.

Frosted Food Displayer Introduced By Fogel

PHILADELPHIA — A complete new line of frosted foods display and storage equipment has just been introduced by Fogel Refrigerator Co. The line includes merchandising cabinets of several types, display cases, and storage cabinets.

Merchandising cabinets are built in eight and 12-hole standard sizes. Exterior is of porcelain, with price ticket molding on the sloping front to accommodate a list of merchandise and prices. A superstructure merchandising board for illuminated display of colored illustrations and listing of items is an extra-cost accessory.

Specially designed hard-rubber doors are claimed to permit quick access to the cabinet interior, which is lined with copper-bearing rustproof metal sheathing and fitted with rustproof steel food dividers. Roller-bearing sliding metal drawers are available, if desired.

Cabinets are insulated with Armstrong low-temperature insulation, to permit long holdover of stored goods. Cabinets may be had self-contained or without compressor.

Frosted food display cases in the line are in lengths of 50 and 74 inches, and have four layers of glass across the full length of the cabinet. Entire exterior and interior of the display section are of porcelain, and there is a porcelain light reflector over the display glass. Price ticket molding is on the front of the cabinet, directly above the reflector. Armstrong low-temperature insulation is used throughout.

These cases can be furnished with self-contained compressor, in which case the overall length is increased by 24 inches.

The company also announced that it has developed means by which sections of storage compartments in its double-duty display cases can be adapted to frosted foods storage.

Frosted food storage cabinets for hotels, restaurants, hospitals, and institutions are built in three standard sizes, with capacities of 360, 525, and 725 lbs. These cabinets, it is said, are designed to provide maximum storage in minimum floor space.

Front, rear, and sides of the exterior are finished in kiln-dried California Sitka spruce. Top is of heavy metal, with hinged metal lids, and interior is lined with copper-bearing rustproof metal sheathing.

Extra-heavy construction of these cabinets makes it possible to keep up to 525 lbs. of frosted foods properly chilled with use of a ¼-hp. low-temperature compressor, it is claimed.

THE BUYER'S GUIDE

SNAP-ACTION VALVE
for Multiple Temperature
by Aminco

A marvelous precision valve designed for systems with more than one coil, operated from the same compressor. Any variety of units such as ice cream cabinets, soda fountains, back bars, water coolers, candy counters, beer coils, storage rooms, etc., may be connected to a single compressor unit by the use of Aminco Snap Action Valve.

Adjustable from 20" of vacuum to 63 pounds pressure. Differential 7 lbs. min. to 29 lbs. max. May be used with any refrigerant except ammonia. For flooded as well as dry gas types or any combination of either. Free from bellows strain.

Send for Bulletin No. 17

AMERICAN INJECTOR COMPANY
1481 Fourteenth Avenue DETROIT, MICHIGAN
Pacific Coast Warehouse Stocks—Van D. Clothier, 1015 E. 16th, Los Angeles, Cal.
Export: Borg-Warner International Corp., 320 S. Michigan Ave., Chicago, Ill.

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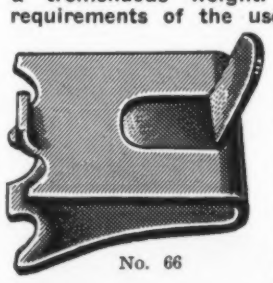
KASON Pilaster Standards
FOR MAKING ADJUSTABLE SHELVING &c.

KASON PILASTER STANDARDS make an ideal support for shelves and for wire trays in refrigerated display cases, &c. Installation is extremely simple. The Clip Brackets employed can be attached or detached in an instant, yet they will support a tremendous weight. Shelf heights can be instantly adjusted to meet changing requirements of the user.



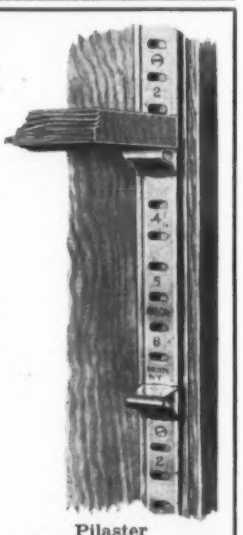
No. 66

PILASTER CLIP BRACKETS

CLIP BRACKETS No. 62 and No. 66 illustrated hereon, are used to support wire trays. The Clip Bracket shown supporting the shelf on the Pilaster Standard is No. 61. Other styles available. Write for descriptive literature.

KASON HARDWARE CORP.
127-137 Wallabout St., Brooklyn, N. Y.

No. 62



Pilaster Standard No. 60

Long Mfg. Co. Strike Is Extended To Norge & Detroit Gear Plants

DETROIT—Strikes in the Norge and Detroit Gear & Machine units of Borg-Warner Corp. were called on Oct. 30 by the United Automobile Workers (CIO) union, following the failure of negotiations between the union and officials of Long Mfg. Co., another Borg-Warner unit.

The strike at Long Mfg. Co. has been in progress since the last week in September. The union seeks a union shop, vacations with pay, and the abolition of piece work. Bonuses for night work and seniority also are involved.

A strike in the Warner Gear division of the company in Muncie, Ind. also has been authorized by the union, according to R. J. Thomas, UAW-CIO president. The Warner Gear division is the largest unit of the corporation, employing 3,800 workers, and making gears, overdrives, and transmissions for several automobile companies.

Long Mfg. Co. employs 700 persons, Norge 350, and Detroit Gear & Machine 860. Both latter plants are at 670 E. Woodbridge St. Warner Gear division workers voted to strike last week, a union official said, but the action was delayed at the request of David Roadley, federal labor conciliator, to give the corporation an opportunity to settle the dispute. J. R. Dryden, vice president of the Long division, last week expressed little hope that a settlement could be reached under conditions at that time.

Grant To Analyze Markets For Westinghouse

MANSFIELD, Ohio—W. W. Grant has been named director of marketing research for the merchandising division of Westinghouse Electric & Mfg. Co.

Mr. Grant will devote his attention not only to market analysis, but to the study of marketing methods, distribution problems, consumer preferences, and sales research problems. He formerly was market analyst in the Westinghouse new products division. In his new capacity, he will be located at the general offices of the merchandising division here.

Agency Sues Taylor Freezer For $50,585 Damages

JANESVILLE, Wis.—A $50,585 claim in a contract action has been filed in circuit court here by Patterson & Dennison, Inc., Milwaukee, against Taylor Freezer Corp., Beloit, with damages of $5,285, $35,300, and $10,000 sought.

The plaintiff claims it is exclusive agent for Taylor products in Milwaukee, Waukesha, Racine, Ozaukee, and Washington counties, and charges that the company sold 100 units to T. S. Cassel and Ross H. Sherwood, salesmen in Milwaukee, without handling them through the agency.

The Milwaukee firm alleges that in its contract, purchase was to be at a price of $353, and that the established retail price is $706. The difference on 100 units makes up the $35,300, the sum of the largest claim in the action. The case is expected to be tried this month.

Wisconsin Utility Conditions Its Display Quarters

RACINE, Wis.—Wisconsin Gas & Electric Co. has installed a 20-ton air-conditioning system in its merchandise display room here. The system, sold and installed by White Bros., Westinghouse distributor, utilizes a variable capacity control on the compressor, for maximum economy.

Control system is completely automatic. A time switch gives day and night control, with Sunday and holiday skip. Outside air is automatically used for cooling whenever possible. A compensating control resets the inside thermostat as outside temperature varies above minimum inside conditions in summer. Humidity control and summer-winter (heating-cooling) changeover also are automatically accomplished.

Refrigeration Firms Well Represented At Coast's Dairy Industries Show

SAN FRANCISCO — Companies supplying refrigerating equipment to the ice cream and frosted food fields had a notable place in the annual Dairy Industries Exposition, which opened last week in San Francisco, reports L. P. Roth, manager of Refrigeration Service, Inc., Los Angeles parts jobber, an "opening day" visitor to the show.

Some candid-camera shots taken by Mr. Roth of refrigeration exhibitors at the Exposition are shown in the adjoining columns.

Both Frigidaire and Kelvinator had rather large displays at the Exposition, Mr. Roth reports, showing both frosted food and ice cream cabinets. Only coil manufacturers in evidence, he says, were Kold-Hold, Dole, and Refrigeration Engineering, a Los Angeles company. "This last company exhibited its low temperature water defrosting blower coils, which in the short time I was there seemed quite interesting to a number of dairy people," Mr. Roth notes.

Another interesting thing to Mr. Roth was the size of some of the equipment being displayed. "Such units as bottle washers, bottle fillers, cappers, sterilizers, and churns really take up a great deal of room when you see them displayed on an exhibition floor," he writes.

"A couple of companies showed truck displays in which the motor was mounted directly forward of the rear axle, this being something which isn't even seen at the automobile shows as yet, but we are told that it is the coming design for pleasure cars.

"Here is one exhibition in which everybody seems to do his best to keep you out," Mr. Roth declares, "this being very much of a contrast to some of the displays in other industries. Judging from the size of the show and the number of delegates, however, it is certainly a step in the right direction, for it assures those who take space that they will have at least luke-warm prospects among those who visit their display booths."

New G-M Diesel Unit Can Be Used In Locker Plants

CHICAGO—A 3-cylinder Diesel "packaged power" unit, known as type ESC and designed to meet the requirements of the ice and refrigeration industry, including cold storage locker plants, has been developed by the Diesel engine division of General Motors Corp. The unit is being shown at the company's exhibit at the Ice Industries Exposition here Oct. 31 to Nov. 3.

Production of 1 ton of ice is claimed for every 4 gallons of fuel oil burned in the 45-hp., 2-cycle unit. Compactness is claimed as another feature. Since a 2-cycle engine does twice the amount of work as one using the 4-cycle principle, same power output is obtained with half the total number of cylinders, reducing overall size of the plant, it is said.

The Diesel powering the unit displayed at the Ice Industries Exposition is equipped with a heavy-duty, over-center clutch for belt drive. It is mounted on a short base containing the starting battery, and is fitted with auxiliary water pump and heat exchanger.

C. E. Wilson Honored At Coast Fair's 'G-E Day'

SAN FRANCISCO — Charles E. Wilson, executive vice president of General Electric, was honored at a luncheon given by 200 Pacific Coast business and civic leaders in celebration of "General Electric Day" (Oct. 7) at the Golden Gate International Exposition.

Notables attending the luncheon included Paul M. Downing, vice president and general manager of Pacific Gas & Electric Co.; Raymond M. Alvord, commercial vice president of General Electric; Angelo J. Rossi, mayor of San Francisco; Leland W. Cutler, president of the Golden Gate International Exposition; and A. P. Giannini, nationally known banker.

Opening Day At the Dairy Industries Exposition

Above, left: The Harold L. Schaefer, Inc. exhibit, showing ice cream cabinets; at right: A display of similar equipment by Liquid Carbonic. Lower left: Frigidaire's ice cream cabinet and frosted foods display; lower right: Refrigeration Engineering's space featuring "Recold" evaporators. Photos by L. P. Roth of Los Angeles.

Change to A-P VALVES

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Since then we have had occasion to install several hundreds of these valves and have had very excellent results using your valves in combination with WORTHINGTON-CARBONDALE equipment on GLOEKLER MANUFACTURING COMPANY'S refrigerators and display cases.

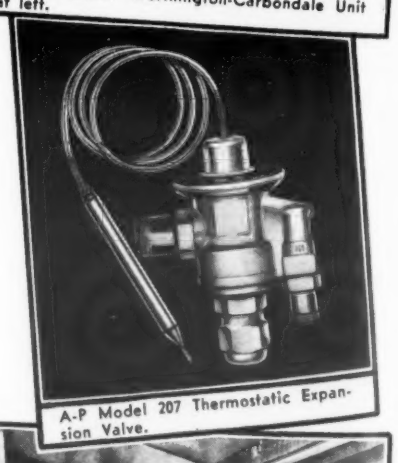
Very truly yours,

WOOD REFRIGERATING COMPANY

E. T. DALE

ETD/ms

Modern Stainless Steel Refrigerator at West Penn Hospital. Worthington-Carbondale Unit at left.



A-P Model 207 Thermostatic Expansion Valve.

Interior of Gloekler Stainless Steel Refrigerator, showing Meat storage racks, shelves and refrigerator coils.

- Installation: West Penn Hospital, Pittsburgh, Pa.
- Equipment: Refrigerator—Gloekler Manufacturing Co. Compressors—Worthington-Carbondale.
- Installed by: Wood Refrigerating Company, Pittsburgh, Pa.
- Valves—A-P.

Hundreds of Refrigeration Engineers are proving that one method to lick Expansion Valve Trouble is a *"Switch to A-P Valves."*

If you want to be CERTAIN of accurate Refrigerant Control on all YOUR installations, follow the example of others. You'll enjoy the feeling of confidence A-P Expansion Valves give you on every job. . . . And you'll profit by the satisfaction your customers express in efficient *trouble-free* installations.

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